M38-5
GENERAL

ENCLOSURE 2

EXTRACTS FROM ANNUAL REPORTS OF THE SURGEON GENERAL

DIVISION OF VENEREAL DISEASES

In charge of Asst. Surg. Gen. TALIAFERRO CLARK

RESEARCH

STUDIES AT THE VENEREAL DISEASE LABORATORY, STAPLETON, N.Y.

The experimental resurvey in the field of personal prophylaxis in syphilis has been continued, and two preliminary studies have been completed and published. The first dealt with an experimental method of contact infection suitable for prophylaxis work, and the second with the time interval necessary for the penetration of the intact mucosa by virulent syphilis organisms.

Experimental studies designed to test the possibility of a life cycle of the spirochete were carried out. By use of special dark field and micro-manipulation equipment, intraocular inoculations of animals with single spiral forms have been done, and also the corollary, the inoculation with material known to be infectious but from which the spiral form has been excluded.

The technique for a combination single cell and tissue culture study has been worked out through which it is hoped to test the ability of the *Spirochaeta pallida* to reproduce under controlled conditions. The preliminary work has been carried out with chick heart cultures to which is added a single spirochete taken from lesions of human or experimental disease.

The influence of hyperpyrexia induced by ultra-short-wave radio has been studied in rabbits with the object of determining the factor in malaria and artificial fever therapy which is responsible for the beneficial results noted in human disease.

STUDY OF UNTREATED SYPHILIS IN THE NEGRO

A project was started to study the late effects of untreated syphilis in the Negro for comparison with treated groups of syphilitic individuals of this race. A county in a State of the far South, with a large Negro population and with rather inadequate facilities in the outlying districts for the treatment of syphilis, was selected so that the greatest number of cases of untreated syphilis might be uncovered with a minimum of effort and expenditure. About 400 persons with untreated syphilis were found and were subjected to intensive clinical and laboratory examinations.

Of 4,025 Negroes serologically tested, 907, or 22.5 percent, gave a definite positive test for syphilis on 2 occasions and an additional 5.5 percent gave doubtful positive tests on 2 occasions or a single positive test at only 1 time. These figures include individuals of both sexes, but only the previously untreated males with two positive serologic tests are included in the study. A preliminary check up indicates that syphilis of the cardiovascular system is extremely common in this racial group and shows that any comprehensive method for the control of heart disease among Negroes must give

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THE VENEREAL

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thorough consideration to the influence of syphilis. Syphilis of the skin and osseous system was also fairly common in the group studied, and involvement of the central nervous system was not infrequent but was usually of a vascular type.

The treatment of syphilis under ideal conditions is of the utmost value in the control of this insidious disease, but, unfortunately, owing to various social and economic influences, the ideal method of therapy is seldom possible of attainment, and the vast majority of infected people receive treatment which is generally regarded as inadequate, or no treatment at all. It is highly desirable, therefore, to ascertain, if possible, the relative benefits accrued from adequate and from inadequate treatment.

STUDIES IN COOPERATION WITH SELECTED CLINICS

Work was continued in the cooperative clinical studies from the case reports of five of the leading venereal disease clinics in the United States, with the financial assistance of a large philanthropic foundation. A series of papers on latent syphilis was completed and published in "Venereal Disease Information." Much valuable information on the results of treatment in early latent and late latent syphilis is contained in this treatise. The results of a study of reports of the reactions following 177,360 injections of the arsenical drugs administered to 8,810 patients was completed and will be published.

STUDIES OF PREVALENCE OF VENEREAL DISEASES

Cooperation was continued with city and State health authorities in an effort to determine the extent of the problem of syphilis and gonorrhea in a number of communities. A prevalence and incidence survey of venereal diseases was made in the city of Chester and Delaware County, Pa., as a part of a general administrative study of the medical facilities in this county. The results of this survey and of those previously made in San Francisco, Calif., and in the city of Birmingham and Jefferson County, Ala., will be published in the official journals of the medical societies of these States.

The results obtained in the 16 communities resurveyed last year have been published. The trend of venereal diseases in these various communities with a total population of 7,000,000 was so irregular that a definite statement cannot be made concerning the increase or decrease of these diseases in the United States as a whole. The composite rate for syphilis in these 16 communities is 11 percent higher. The higher percentage of cases of early syphilis coming for treatment is a hopeful sign for ultimate control of the disease. The trend for gonorrhea was slightly downward, although there were a number of small cities and counties which showed a decidedly high percentage of increase. This lack of uniform decrease in the gonorrhea rate should cause some hesitation in the acceptance of these lower rates as representing a true decrease in the number of individuals needing treatment.

THE VENEREAL DISEASE CLINIC, HOT SPRINGS, ARK.

There were 4,033 applicants for treatment at the Public Health Service Clinic which is conducted for the treatment of indigent persons infected with venereal diseases. Only 2,883 of these applicants were

found to be infected. This number, however, represented 4,485 cases of venereal disease, since 1,602, or 56 percent, had both syphilis and gonorrhea. A total of 78,146 treatments were given. (See tables 5 and 6 for summary of clinic activites for the year.)

The study of 10,000 syphilis records obtained from patients treated at this clinic was completed and will be published in the near future.

Seven physicians were given postgraduate courses at the clinic on request.

Cooperative Activities

State Health departments.—Continued assistance has been extended to the several States requesting aid in the organization of venereal disease control measures when assurance has been given by the State health department that venereal disease activities are to become a continuous and integral part of their health programs. Members of the field staff have been engaged in the States of Tennessee, North Carolina, and Alabama in working out the details of such a program. Activities previously undertaken in the States of Georgia, Mississippi, and Virginia have been continued by the States themselves.

Forty-seven States reported the prevalence of venereal diseases and the measures employed for their control. These States reported 386,507 cases of venereal disease, 234,647 cases of syphilis, 149,527 cases of gonorrhea, and 2,423 cases of chancroid. Laboratory examinations to the number of 2,118,038 were reported, including 1,742,509 serologic tests for the diagnosis of syphilis, 7,776 dark field examinations, and 367,803 examinations for the gonococcus. A total of 1,285,665 doses of arsphenamines were distributed, an increase of 6 percent over 1932. The State activities are shown in table 1.

In 1933, 572 clinics reported the venereal diseases to the Public Health Service through their State health departments, as compared with 533 in 1932. These clinics reported 149,943 new admissions. (See table 8 for detailed report.)

Office of Indian Affairs, Department of Interior.—Aid has been extended to this office on request of the Commissioner. In North Carolina a survey of the Cherokee Indian Reservation was made and 1,080 Indians were serologically tested for syphilis; approximately 6 percent were found positive.

Division of Marine Hospitals.—The maintenance of special case record forms, prepared several years ago to secure a continuity of record in cases of syphilis treated in the marine hospitals and to standardize therapeutic methods as far as practicable, was continued. Nine additional hospitals expressed their desire to participate during the year. It is now possible to give definite information regarding the past treatment of a large group of the beneficiaries of the Service infected with syphilis.

A study of the records of 30,000 beneficiaries admitted to the marine hospitals in the past 2 years is being conducted to determine the occurrence of syphilis among those admitted for hospitalization and treatment under some other diagnosis. A preliminary study shows that 12 percent of the patients in marine hospitals have syphilis. The study should also determine the extent to which syphilis prolongs hospitalization in cases in which it complicates some other illness and may even indicate the importance of a syphilitic infection in the production of some puzzling diseases of unknown etiology.

Division of Mental Hygiene.—The special case record forms which have been employed so successfully in the marine hospitals of the Public Health Service were introduced, in cooperation with the Division of Mental Hygiene, in the Federal penal and correctional institutions. The use of these forms should yield manifold benefits in standardizing the diagnosis and treatment of the venereal diseases and should be of great value in furnishing a continuous record when prisoners are transferred from one institution to another.

Venereal Disease Information

The number of subscriptions to the monthly abstract journal Venereal Disease Information, published by this division, averaged 6,240. Curtailment of the appropriation for printing has made it necessary to decrease the number of abstracts previously published by more than 50 percent. Venereal Disease Information is the only publication which is devoted almost solely to the publication of abstracts of the current medical literature pertaining to the venereal diseases, and its value in placing the opinion of authorities before the practicing physician is inestimable. The total mailing list, both paid and gratis, to Venereal Disease Information averaged 8,943.

Requests for educational material on venereal diseases and sex hygiene numbered 9,523. There were 85,203 publications distributed to State health departments and private individuals, and 176 reels of the film "The Science of Life" sent to 25 organizations and schools in 13 States.

TABLE 1.—*Report of State departments of health showing the number of cases of syphilis and gonorrhea reported, the annual rates per 1,000 inhabitants, the amount of arsphenamine distributed, and the laboratory examinations made from July 1, 1932, to June 30, 1933*

State	Number of cases		Annual rate for syphilis and gonorrhea per 1,000 inhabitants [1]	Doses of arsphenamines distributed	Laboratory examinations		
	Syphilis	Gonorrhea			Wassermann (or other similar) tests	Microscopic examinations for *Spirochaeta pallida*	Microscopic examinations for gonococcus
Total	234,647	140,527	2.2	1,285,065	1,142,509	7,776	367,693
Alabama	9,013	2,643	4.8	70,303	15,045	133	10,556
Arizona	162	150	.8				
Arkansas	3,998	1,645	3.0	20,159	32,559	451	9,298
California	13,357	13,430	5.8	227,237	86,819	155	26,653
Colorado [3]	370	210	1.2	4,170	5,145		1,181
Connecticut	973	805	1.1	12,615	3,255	16	1,367
Delaware	1,514	406	2.1	3,973	4,324		755
District of Columbia	2,122	1,335	7.1	11,694	6,707	33	4,069
Florida	3,799	805	3.1	17,210	12,056	52	867
Georgia	12,184	6,036	6.2	70,792	77,412		3,600
Idaho					9,089		1,467
Illinois	17,115	15,266	4.3	66,809	92,806	2,244	47,448
Indiana	2,730	1,517	1.4	12,811	105,703		6,455
Iowa	721	377	.5	9,792	2,856	128	3,193
Kansas	1,057	844	1.0	10,835	28,703	16	2,717
Kentucky	5,520	4,522	3.2	25,158	10,677	491	5,547
Louisiana	2,611	1,475	1.9	13,685	17,615	67	3,329
Maine	460	507	1.3	3,012	8,661		3,723
Maryland	3,951	2,601	4.1	52,168	11,982	71	6,427
Massachusetts	4,352	6,413	2.5	81,093	122,941		9,600
Michigan	10,222	6,081	3.5	42,212	38,878	185	38,306
Minnesota	3,856	4,284	3.2	9,244	115,348		12,852
Mississippi	10,154	15,437	12.7		24,214		1,157
Missouri	2,602	2,718	1.5	23,031	25,367	1,292	15,306
Montana	523	343	1.6				
Nebraska	647	969	1.2	7,793	23,759	40	4,198
Nevada [3]					1,203		306
New Hampshire	148	143	.6	2,266	6,611		2,116
New Jersey	6,824	3,203	2.6	30,348	43,880		5,907
New Mexico	525	223	1.4				
New York	33,834	37,778	5.7	99,035	497,491	513	52,400
North Carolina	4,317	2,595	2.0				
North Dakota [2]	231	717	1.5	240	5,173	29	2,851
Ohio	7,663	4,082	1.7	62,725	46,896	1,141	13,873
Oklahoma	1,475	1,228	1.1				
Oregon [5]	440	522	1.2	4,605	9,817	35	3,495
Pennsylvania [4]	3,855	3,484	.8	33,457	64,867		16,560
Rhode Island	1,076	893	2.7	12,536	15,390	42	3,571
South Carolina	5,241	7,329	7.3	[4] 2,551	4,580		[5] 2,657
South Dakota	221	491	1.0		5,806		
Tennessee	13,477	6,392	7.6	65,536	45,153	185	7,013
Texas	5,661	672	1.1	37,054	7,580	13	2,651
Utah [6]							
Vermont	281	365	2.1	[5] 1,827	[5] 4,307	[5] 4	[5] 1,119
Virginia	4,313	2,637	2.0	[7] 3,762	[7] 10,559		[7] 926
Washington	2,442	2,412	3.1	8,912	41,745	109	22,058
West Virginia	2,071	1,075	1.8	37,368	8,729	83	2,062
Wisconsin	527	1,438	.7	7,208	10,963	67	10,381
Wyoming [6]							

[1] Excludes chancroid which formerly was included in the annual rates.
[2] For 6 months.
[3] For 11 months.
[4] In the absence of reporting regulations in Pennsylvania only the reports received from the clinics operated by the Pennsylvania State Health Department are included.
[5] For 10 months.
[6] Not reporting.
[7] For 2 months.

TABLE 2.—*Report of 72 corre… boar…*

New cases admitted:
Syphilis……
Gonorrhea……
Chancroid……

Total……

Cases discharged as arrested …
Treatments given……
Doses of arsphenamines admi…
Wassermann tests made……
Microscopic examinations for…

TABLE 3.—*Report of 672 cli…*

[1] States which did not report …
Arizona, Delaware, Idaho, Mi…
South Dakota, Texas, Utah, Verm…
[2] Includes … both given …
[3] For 6 months
[4] For 8 months
[5] For 11 months
[6] For 3 months
[7] For 2 months

TABLE 2.—*Report of 72 correctional and penal institutions cooperating with State boards or departments of health*

	Number
New cases admitted:	
Syphilis	7,586
Gonorrhea	3,619
Chancroid	77
Total	11,282
Cases discharged as arrested or cured	7,878
Treatments given	308,691
Doses of arsphenamines administered	49,917
Wassermann tests made	54,369
Microscopic examinations for gonococcus	15,569

TABLE 3.—*Report of 572 clinics furnished through State health departments, July 1, 1932, to June 30, 1933* [1]

State	Total monthly reports received	New cases admitted: Total	Syphilis	Gonorrhea	Chancroid	Cases discharged as arrested or cured	Treatments given	Doses of arsphenamines administered	Wassermann tests made	Microscopic examinations for gonococcus
Total	6,024	140,943	80,849	57,522	2,572	54,637	3,920,073	804,714	540,526	221,714
Alabama	124	11,738	9,309	2,327	102	3,217	162,329	60,867	11,313	1,541
Arkansas	40	6,169	3,734	2,432	3	3,465	[2] 188,877	19,303	33,079	10,031
California	385	15,181	7,955	7,199	27	3,037	285,534	60,093	45,931	22,551
Colorado [3]	24	463	261	197	5	300	17,029	4,170	1,188	488
Connecticut	125	1,549	734	808	7	1,333	50,841	12,678	3,265	1,267
District of Columbia	12	3,476	2,122	1,343	11	202	39,085	11,094	5,327	4,059
Florida	36	3,173	2,318	786	69	267	37,971	17,193	12,606	591
Georgia	82	3,827	2,270	1,515	42	1,815	63,923	28,863	27,473	1,032
Illinois	282	12,925	6,627	6,239	59	3,854	378,475	95,841	24,041	40,867
Indiana	191	3,443	1,556	1,287	83	2,186	174,470	40,142	21,929	4,259
Iowa	120	1,297	721	571	5	620	42,535	9,762	2,859	3,183
Kansas	36	824	414	383	27	267	27,743	6,816	2,694	1,577
Kentucky	293	8,484	3,531	4,442	511	5,225	61,058	24,511	11,405	3,634
Louisiana	21	623	324	296	3	116	7,394	2,895	1,675	1,360
Maine	96	689	310	379		216	13,497	3,642	1,129	264
Maryland	332	5,604	2,933	2,396	275	2,167	119,491	52,256	11,562	4,053
Massachusetts	301	6,140	3,028	3,112		1,555				
Michigan	154	6,414	3,033	3,316	65	3,068	213,195	13,152	37,699	38,375
Minnesota	47	765	378	386	1	229	25,750	4,829	2,796	999
Missouri	92	1,138	624	513	1	605	41,311	7,687	11,471	2,100
Nebraska	36	958	510	442	6	220	29,460	7,097	5,321	2,443
New Hampshire	60	257	121	135	1	142	9,458	2,160	805	491
New Jersey	305	7,715	1,841	5,840	34	2,245	234,670	88,243	21,289	5,288
New York	772	10,070	7,237	2,819	14	7,497	244,276	98,456	30,668	23,370
North Dakota [4]	8	51	24	27		50	750	240	73	149
Ohio	493	12,472	6,768	4,399	1,305	3,711	251,168	61,243	42,150	12,341
Oregon [4]	11	334	233	101		65	15,959	4,051	1,147	849
Pennsylvania	550	6,902	3,561	3,176	165	4,182	70,412	38,160	16,877	
Rhode Island	72	840	513	327		535	27,870	7,899	13,717	3,571
South Carolina [6]	6	221	106	109	6		503	542	199	321
Tennessee	327	10,425	7,334	2,899	192	3,314	204,812	53,550	46,254	6,232
Virginia [7]	11	744	580	157	7	192	6,703	3,467	2,155	187
Washington	36	1,679	905	771	3	1,368	40,394	9,262	21,157	17,927
West Virginia	199	2,954	1,967	978	9	308	64,696	20,690	8,762	2,062
Wisconsin	132	1,355	734	620	1	541	50,431	7,258	10,982	9,947

[1] States which did not report and those which had no clinics have been omitted from this table; they are Arizona, Delaware, Idaho, Mississippi, Montana, Nevada, New Mexico, North Carolina, Oklahoma, South Dakota, Texas, Utah, Vermont, and Wyoming.
[2] Includes 97,[illegible] baths given at the U.S. Public Health Service clinic, Hot Springs National Park, Ark.
[3] For 6 months
[4] For 8 months
[5] For 11 months
[6] For 3 months
[7] For 2 months

TABLE 4.—*Report of cooperative clinic activities furnished through State health departments from 1919 to 1933*

Year	Number of clinics reporting	New cases admitted	Total treatments given	Cases discharged as arrested or cured	Treatments per new case admitted
1919	167	59,032	5??,392	14,0??	8.92
1920	388	126,131	1,576,842	24,215	12.50
1921	442	140,745	2,10?,1??	55,407	14.93
1922	541	141,279	2,048,252	60,100	14.48
1923	513	119,217	1,992,131	55,556	16.71
1924	5??	118,023	2,147,157	51,433	18.19
1925	495	110,372	2,088,434	47,628	18.92
1926	416	10?,775	1,???,?40	44,324	18.67
1927	405	107,888	1,6?4,223	41,791	15.24
1928	451	110,756	2,174,552	40,487	19.61
1929	445	121,315	2,128,177	32,135	17.09
1930	477	12?,978	2,540,102	55,502	19.90
1931	512	142,915	2,832,700	57,453	19.83
1932	603	115,093	2,871,150	55,505	18.54
1933	572	149,913	3,209,673	64,007	21.40

TABLE 5.—*Report of the United States Public Health Service clinic at Hot Springs National Park, Ark., from July 1, 1932, to June 30, 1933* [1]

Total applicants	4,036
Venereal	[2] 2,883
Nonvenereal	1,153
Syphilis	2,850
New cases	2,124
Readmitted cases	726
Gonorrhea	1,635
New cases	1,097
Readmitted cases	538
Syphilis (new cases)	2,124
Primary	188
Secondary	290
Tertiary	1,525
Neuro	86
Congenital	35

Gonorrhea (new cases)	1,097
Acute	245
Chronic	852
Total treatments given	168,955
Arsphenamines	14,351
Mercury and bismuth	28,422
Other syphilis	717
Gonorrhea	29,976
Baths	95,489
Laboratory examinations	59,946
Complement fixation tests	13,321
Precipitation tests	13,316
Icterus indices	13,350
Darkfields	429
Gonococcus smears	7,901
Urine analyses	11,629

[1] From the annual report of the clinic.
[2] The 2,853 patients represent 4,455 cases; 1,602 patients had both syphilis and gonorrhea.

TABLE 6.—*Report of the United States Public Health Service clinic at Hot Springs National Park, Ark., from July 1, 1932, to June 30, 1933*

Year	Number of applicants	Number of cases			Treatments given[1]
		Total venereal diseases	Syphilis	Gonorrhea	
Total	51,982	43,651	27,376	16,285	760,343
1922	2,720	1,775	1,182	593	43,820
1923	3,389	1,851	1,325	528	41,520
1924	3,676	2,186	1,447	739	39,833
1925	3,411	2,782	2,011	771	30,898
1926	3,570	3,094	2,211	853	51,500
1927	4,757	3,682	2,504	1,175	53,482
1928	5,497	4,131	2,626	1,505	72,466
1929	5,263	3,989	2,512	1,471	78,519
1930	5,764	4,111	2,743	1,068	73,149
1931	4,851	5,088	2,779	2,312	65,215
1932	5,108	6,154	3,185	2,906	63,707
1933	4,036	4,455	2,850	1,605	73,493

[1] Baths not included.

TABLE 7.—*Statistical summary of activities in the control of venereal diseases for the fiscal years 1932 and 1933*

	1933	1932[1]
MEDICAL ACTIVITIES		
A. Cases of venereal diseases reported to State health departments:		
I. Syphilis	234,647	242,124
II. Gonorrhea	149,327	154,051
III. Chancroid	2,423	3,469
Total	386,397	399,644
B. Doses of arsphenamines distributed by State health departments	1,280,623	1,216,025
C. Clinics:		
I. Clinics established during the year	58	47
II. Clinics reporting to State health departments	572	533
III. Report from clinics:		
a. New cases admitted	149,945	150,905
b. Cases discharged as arrested or cured	64,027	64,245
c. Treatments given	3,208,074	2,273,739
d. Doses of arsphenamines administered	864,714	753,749
e. Wassermann (or other similar) tests made	540,526	521,458
f. Microscopic examinations for gonococcus	221,714	197,256
EDUCATIONAL ACTIVITIES		
A. Pamphlets:		
I. Requests for pamphlets received by the Public Health Service	9,323	13,112
II. Pamphlets distributed:		
a. By the Public Health Service to State health departments and others	85,203	191,126
b. By State health departments	462,656	627,252
Total	548,189	818,378
III. Venereal disease pamphlets issued by the Public Health Service	2	8
B. Lectures, exhibits and film showings reported by State health departments:		
I. Number	2,838	2,728
II. Average attendance	81	87
C. Motion picture films loaned by the Public Health Service	176	191

[1] Data for 1932 were changed from previously published figures because of corrections or the receipt of additional reports.

DIVISION OF VENEREAL DISEASES

Asst. Surg. Gen. JOHN McMULLEN in charge

The Division of Venereal Diseases was established by law to study the cause, treatment, and prevention of syphilis, gonorrhea, and chancroid; to cooperate with the State departments of health in the control of these diseases; and to prevent their spread through interstate travel. For the fiscal year ended June 30, 1934, the appropriation for the work of the Division, after deductions required by law, amounted to $58,600. This sum, however, does not represent the entire amount of money available to cover all activities of the Division. Grants have been made by two philanthropic organizations in order that special pieces of work might be continued.

COOPERATIVE CLINICAL STUDIES

For the past several years the Division has participated in studies of the clinical aspects of syphilis and the results of treatment. These studies are sponsored by the League of Nations Health Organization and carried on in this country by the combined efforts of the Public Health Service and a group of five of the leading clinics, with the financial assistance of the Milbank Memorial Fund. During the past year a procedure of treatment for early syphilis was formulated and published in Venereal Disease Information and the Journal of the American Medical Association under the title "Standard Treatment Procedure in Early Syphilis. A Résumé of Modern Principles." Two other studies growing out of this cooperative undertaking were completed. The subjects were "Arsenical Reactions" and "Syphilis in Pregnancy." The findings reported in the latter confirm the observation that transmission of syphilis from mother to infant can be prevented in almost every case if the pregnant woman is treated.

An exhibit was prepared by the American Social Hygiene Association and the Public Health Service, with the permission of the five cooperating clinics, to illustrate the findings of these cooperative clinical studies. This exhibit was shown at the annual meeting of the American Medical Association held in Cleveland and also at the meeting of the National Medical Association held in Nashville. Miniature reproductions of the exhibit were made in the expectation that these charts might be of value for the instruction of medical students and talks before medical societies. Reprints of the published articles coming from the cooperative group, and mimeographed articles by some of the participating clinicians were distributed at the Cleveland exhibit.

HEALTH SURVEY IN THE SOUTH

The effects of treatment have also been studied from another angle. At the suggestion of a representative of the Julius Rosenwald Fund, surveys have been set in motion to go over the ground covered a few

years ago by the health demonstrations in various Southern communities. The major interest at the outset of these projects was the development of more effective medical service to persons infected with syphilis as a means of curing and preventing the spread of the disease. An evaluation of that work in Macon County, Ala., Glynn County, Ga., Pitt County, N. C., and Albemarle County, Va., was undertaken during the past year, but has not yet been completed.

Research

Experimental studies have been continued at the laboratory of the Stapleton Marine Hospital. A study of the role of old and latent syphilis in the dissemination of the disease, designed to determine the frequency and importance of the syphilis carrier, was continued during the year. Animal experimentation was employed in the evaluation of mercury in the prevention of infection and the testing of several substances which are apparently capable of exerting a definite spirocheticidal influence before the infecting organism has penetrated the exposed integument. The conclusions were published in Venereal Disease Information. The life cycle of the *Spirochaeta pallida* has been the subject of experimentation. A study of the effect of temperature elevation upon experimental disease in the rabbit has been completed. The results indicate that a considerable sterilizing effect can be obtained from either intermittent or continuous hyperpyrexia.

Prevalence Studies

Prevalence studies have been continued, a survey having been made in Miami and Dade County, Fla., and a State-wide survey in New Mexico. Results of a survey of San Francisco which was made during the preceding year were published during this fiscal year. A resurvey to determine the trend of venereal diseases was completed in Cleveland. In that city the case rates per 1,000 population were as follows: Syphilis, 5.3; gonorrhea, 2.8, showing a decrease from the estimate of several years ago.

Statistical analyses of the prevalence of syphilis among in-patient hospital beneficiaries of the United States Public Health Service hospitals were begun in the preceding fiscal year. Preliminary figures show that 17 percent of all patients admitted to the marine hospitals were infected with syphilis.

Work in Cooperation with State Health Departments

Preventive measures were carried forward in cooperation with State and local health departments. Forty-seven States are now reporting cases of venereal diseases to the Division. The total numbers of cases reported were 230,800 cases of syphilis, 153,255 cases of gonorrhea, and 1,808 cases of chancroid. These figures show a slight decrease from last year. Doses of arsphenamine distributed by State health departments amounted to 1,279,600. Reports from 616 cooperating clinics were furnished through the State departments of health. From this source, 76,089 new cases of syphilis, 51,254 of gonorrhea, and 1,419 of chancroid were recorded. There were 55,710 cases discharged as arrested or cured, 3,068,685 treatments given, and 824,626 doses of an arsphenamine administered. During the

preceding year only 5[illegible] venereal diseases was [illegible]

In an effort to arouse [illegible] ing his cases of syph[illegible] mimeographed copies [illegible] the two diseases by St[illegible] Medical journals have [illegible]

State departments [illegible] efficient distribution a[illegible] the country. One [illegible] the publication Vener[illegible] States for distributio[illegible] control of venereal d[illegible] journals has also been [illegible]

Public Health Serv[illegible] disease control activit[illegible] In North Carolina th[illegible] The State departmen[illegible] nished them with fre[illegible] carried on the active [illegible] the local relief off[illegible] only a few new cli[illegible] ment in the manag[illegible] county health depar[illegible] held in Raleigh was [illegible] Talks to college and h[illegible] civic clubs, and radi[illegible] talks were broadcas[illegible] published much i[illegible] were given pub[illegible]

In Tennes[illegible] in the formulati[illegible] of the Tennessee [illegible] director of the Tenn[illegible] all means at the comm[illegible] legal, and epidemio[illegible] the National Record[illegible] 1,000 additional ne[illegible] and treatment was [illegible] their families found [illegible] positive reactions to [illegible] examinations of hum[illegible] records and reporting[illegible]

At the request of t[illegible] census of venereal [illegible] partment of Health [illegible] cooperating.

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preceding year only 572 clinics reported; the total number of cases of venereal diseases was about 20,000 less this year.

In an effort to arouse the interest of the private physician in reporting his cases of syphilis and gonorrhea to the health authorities, mimeographed copies of morbidity reports and prevalence rates for the two diseases by States have been distributed to all health officers. Medical journals have also been asked to publish these reports.

State departments of health were requested to cooperate in more efficient distribution of information to the practicing physicians of the country. One hundred thousand copies of a leaflet describing the publication Venereal Disease Information have been sent to 28 States for distribution to physicians and others interested in the control of venereal diseases. The assistance of the State medical journals has also been enlisted.

Public Health Service officers were detailed to direct venereal-disease control activities in two States, North Carolina and Tennessee. In North Carolina the cooperative clinician plan was put into practice. The State department of Health appointed 35 physicians and furnished them with free drugs for the treatment of patients who were carried on the active relief rolls and others who, in the judgment of the local relief officers, were unable to pay for treatment. While only a few new clinics were established, there was a marked improvement in the management of many of the clinics operated by full-time county health departments. An exhibit arranged for the State fair held in Raleigh was attended by approximately 11,000 persons. Talks to college and high-school students, parent-teacher associations, civic clubs, and industrial groups reached 20,000 persons. Radio talks were broadcast from the Raleigh station. The newspapers have published much information, and in several instances special articles were given publicity. Addresses were made to 12 medical societies.

In Tennessee the director of control activities was detailed to assist in the formulation of a venereal-disease program for the Norris Area of the Tennessee Valley Authority, at the request of the medical director of the Tennessee Valley Authority. The program included all means at the command of health authorities—educational, medical, legal, and epidemiological. In one plant in the State, affected by the National Recovery Act code, it was found necessary to employ 1,000 additional men. All applicants were examined serologically, and treatment was given to the men as well as to the members of their families found to be infected. In this group 4.1 percent gave positive reactions to the blood examination. Blood and spinal fluid examinations of inmates of penal institutions were made and uniform records and reporting systems installed.

At the request of the State health officer of New Mexico, a 1-day census of venereal diseases was taken, the New Mexico State Department of Health and the American Social Hygiene Association cooperating.

The Florida State Department of Health and the Florida Medical Association requested an officer to give a series of lectures on the venereal diseases to physicians of the State during a postgraduate course at the University of Florida. Ninety doctors registered for the course. The director of the Hot Springs Clinic was detailed to this work.

Venereal Disease Clinic, Hot Springs, Ark.

The only clinic which is maintained by the Public Health Service is the one at Hot Springs, Ark. The tremendous influx of transients into the city has added greatly to the volume of work in the clinic. Six thousand six hundred and eighty-two persons applied for treatment, an increase of 65.6 percent over the preceding year. Four thousand six hundred and ninety-two were found to be suffering from a venereal disease, 62.7 percent more patients than in 1933. The increase in the number of cases of venereal disease was, however, only 25.0 percent—16.8 percent increase in cases of syphilis and 39.3 percent increase in cases of gonorrhea. Injections of arsphenamine amounted to 25,072—74.8 percent more than last year. All of the different forms of treatment were increased in the same proportion. Treatment for this group of patients has been rendered more effective by the fact that the stay of many of these patients in Hot Springs has been considerably prolonged through the cooperation of the Transient Bureau, which provided maintenance for patients unable to pay their own living expenses.

One Public Health Service officer was detailed to the Hot Springs Clinic for 6 months' training.

Prevention of Spread by Interstate Travel

An interesting example of the prevention of spread of venereal disease by interstate travel is seen in the case of the men of the Conservation Corps Camps who are discharged on account of venereal infection.

To prevent these men from being returned to their homes in an infectious stage, the Army amended its regulations governing the discharge of infected men to provide that they be hospitalized until the acute stage of the disease is over and the danger of transmission of infection is past; and when patients are transferred to hospital, a Government ambulance or conveyance other than common carrier is used.

Venereal Disease Information

The division carried on its educational work through Venereal Disease Information, a journal of abstracts of interest primarily to practicing physicians and health officers, pamphlets on venereal diseases and sex instruction, and exhibits and films, all of which are available to the public. Subscriptions to Venereal Disease Information have shown a gradual gain in the past 6 months, due in part at least to the circularization of the State and county medical societies and fourth-year students of the medical schools. Reprints of six of the special articles have been widely distributed. The information service which is maintained in connection with Venereal Disease Information has grown during the year, an increasing number of requests for information being received by the Division from syphilologists, general practitioners, and others interested in the treatment and control of syphilis and gonorrhea. Bulletins found most useful in the program of sex education have been reprinted. Two—Keeping Fit and Healthy Happy Womanhood—have been revised and will be ready for distribution shortly. State departments of health have distributed 385,743 bulletins and pamphlets. The Public Health

Service has distrib[illegible]
106,536 pamphlets. [illegible]
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The American Ass[illegible]
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Table 1.—*Report of* [illegible]
syphilis and gonorr[illegible]
of arsphenamine di[illegible]
1933, to June 30, 1[illegible]

State	Nu[illegible] Syph[illegible]
Total	[illegible]
Alabama	[illegible]
Arizona	
Arkansas	[illegible]
California	[illegible]
Colorado [4]	
Connecticut	[illegible]
Delaware	
District of Columbia	
Florida	
Georgia	[illegible]
Idaho	
Illinois	[illegible]
Indiana	[illegible]
Iowa	
Kansas	
Kentucky	
Louisiana	
Maine	
Maryland	[illegible]
Massachusetts	
Michigan	[illegible]
Minnesota	[illegible]
Mississippi	[illegible]
Missouri [4]	
Montana	
Nebraska	
Nevada [4]	—
New Hampshire	
New Jersey	[illegible]
New Mexico	
New York	[illegible]
North Carolina	
North Dakota [4]	
Ohio	[illegible]
Oklahoma	

[1] Excludes chancroid which [illegible]
[2] For 1 month.
[3] For 10 months.
[4] Not reporting.
[5] For 11 months.

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Service has distributed to State health departments and others 106,536 pamphlets. Lectures, exhibits, and film showings reported by State health departments numbered 1,530. The one educational film "Science of Life", which is furnished by the Division on request, has been sent to 20 schools and other organizations. The film was lent 208 times.

PROPOSED SEROLOGIC CONFERENCE

The American Association of Clinical Pathologists has proposed to the Public Health Service, Division of Venereal Diseases, that a North American serologic conference be held, such as the conferences held in previous years in Paris, Copenhagen, and Montevideo. This conference is to be Nation-wide, however, instead of international. Preliminary arrangements have been made and it is expected that the conference will be held in the coming year.

TABLE 1.—*Report of State departments of health showing the number of cases of syphilis and gonorrhea reported, the annual rates per 1,000 inhabitants, the amount of arsphenamine distributed, and the laboratory examinations made, from July 1, 1933, to June 30, 1934*

State	Number of cases		Annual rate for syphilis and gonorrhea per 1,000 inhabitants[1]	Doses of arsphenamines distributed	Laboratory examinations		
	Syphilis	Gonorrhea			Wassermann (or other similar) tests	Microscopic examinations for *Spirochaeta pallida*	Microscopic examinations for gonococcus
Total	230,890	174,285	3.1	1,279,690	1,716,489	6,040	742,945
Alabama	2,714	1,379	1.9	23,115	68,132	391	11,467
Arizona	365	752	2.3				
Arkansas	2,824	2,115	2.9	30,562	33,388	261	11,343
California	18,220	11,231	5.4	229,900	77,193	605	27,[illegible]
Colorado[2]	41	22	.7		755		355
Connecticut	2,105	1,531	2.2	[3] 8,750	[3] 4,587	[3] 14	[3] 4,263
Delaware	1,152	383	6.7	3,850	5,863		627
District of Columbia	1,773	1,384	6.3	16,433	6,111	76	5,152
Florida	3,647	632	3.7				
Georgia	5,990	4,589	3.0	67,933	81,575		4,562
Idaho					14,751		1,597
Illinois	15,457	14,573	3.8	92,953	101,491	7,874	47,802
Indiana	2,533	1,475	1.1	48,873	125,134		6,112
Iowa	1,699	2,156	1.5	5,677	1,452	40	1,954
Kansas	1,177	816	1.1	9,521	36,532	13	2,615
Kentucky	2,519	4,193	2.7	21,227	9,314	344	5,679
Louisiana	2,239	1,279	1.6	13,791	22,650	86	3,695
Maine	313	522	1.3	4,196	16,537		3,424
Maryland	7,145	2,812	6.0	43,419	13,176	70	5,757
Massachusetts	4,483	6,675	2.6	87,455	113,099		8,868
Michigan	6,039	6,053	2.4	44,263	55,965		30,373
Minnesota	4,052	4,037	3.1	9,476	127,312		13,692
Mississippi	11,421	18,491	14.6		28,864		10,494
Missouri[5]	5,625	3,391	3.0	5,046	22,812	152	4,163
Montana	443	316	1.5				
Nebraska	583	976	1.1	5,725	37,313	5	4,080
Nevada[4]							
New Hampshire	173	264	.9	2,348	6,950		2,425
New Jersey	7,135	3,478	2.5	40,335	60,375		9,426
New Mexico	420	319	1.7				
New York	50,114	16,966	5.9	94,604	310,720		32,631
North Carolina	10,424	4,218	4.3	44,420	81,925	20	1,874
North Dakota[3]	279	590	1.4		6,774	4	1,702
Ohio	7,752	3,362	1.0	54,241	36,689	580	10,784
Oklahoma	1,840	1,620	1.7				

[1] Excludes chancroid which formerly was included in the annual rates.
[2] For 1 month.
[3] For 10 months.
[4] Not reporting.
[5] For 11 months.

TABLE 1.—*Report of State departments of health showing the number of cases of syphilis and gonorrhea reported, the annual rates per 1,000 inhabitants, the amount of arsphenamine distributed, and the laboratory examinations made, from July 1, 1933, to June 30, 1934*—Continued

State	Number of cases		Annual rate for syphilis and gonorrhea per 1,000 inhabitants	Doses of arsphenamines distributed	Laboratory examinations		
	Syphilis	Gonorrhea			Wassermann (or other similar) tests	Microscopic examinations for Spirochaeta pallida	Microscopic examinations for gonococcus
Oregon	554	729	1.3	5,531	12,882	27	4,512
Pennsylvania [5]	3,395	2,942	.7	40,109	46,202		14,010
Rhode Island	947	616	2.2	9,775	14,714	47	3,408
South Carolina	4,630	6,149	6.2				
South Dakota	134	351	.7		5,863		76
Tennessee	12,183	6,229	7.0	71,490	57,343	157	7,011
Texas	5,413	725	.7	56,245	9,633	7	1,334
Utah [4]							
Vermont	241	371	1.7	1,799	5,507	7	1,320
Virginia	4,841	3,312	3.3	17,937	13,320	12	3,409
Washington	2,959	2,546	2.6	10,467	48,019	137	20,679
West Virginia	2,714	1,384	2.3	37,411	9,031	19	3,275
Wisconsin	[7] 409	2,675	.9	9,197	9,338	73	7,950
Wyoming [8]	10	13	.5				

[4] Not reporting.
[5] In the absence of reporting regulations in Pennsylvania only the reports received from the clinics operated by the State health departments are included.
[7] Only cases of syphilis in the infectious stage are reported.
[8] For 3 months.

TABLE 2.—*Report of 127 correctional and penal institutions cooperating with State departments of health* [1]

	Number
New cases admitted:	
Syphilis	8,479
Gonorrhea	3,824
Chancroid	110
Total	12,413
Cases discharged as arrested or cured	7,289
Treatments given	335,947
Doses of the arsphenamines administered	57,422
Serologic tests made	57,934
Microscopic examinations for gonococcus	14,764

[1] Includes 49 prison camps.

... the number of cases of ... inhabitants, the amount ... from July 1,

	Laboratory examinations	
[illegible]	Microscopic examinations for Spirochaeta pallida	Microscopic examinations for gonococcus
[illegible]	27	4,512
[illegible]		11,619
[illegible]	47	3,432
[illegible]		76
[illegible]	157	7,011
[illegible]	7	1,324
[illegible]	7	1,320
[illegible]	12	3,439
[illegible]	157	20,673
[illegible]	19	3,276
[illegible]	73	7,930

... from the clinics operated

... cooperating with State

	Number
	8,479
	3,824
	110
	12,413
	7,239
	335,947
	57,422
	57,934
	14,764

TABLE 3.—*Report of 619 clinics, furnished through State health departments, July 1, 1933, to June 30, 1934* [1]

State	Total monthly reports received	New cases admitted: Total	Syphilis	Gonorrhea	Chancroid	Cases discharged as arrested or cured	Treatments given	Doses of arsphenamines administered	Wassermann tests made	Microscopic examinations for gonococcus
Total	6,307	128,762	76,089	51,254	1,419	55,710	3,068,685	524,625	551,147	210,750
Alabama	73	4,888	3,071	1,857	67	1,254	60,482	20,807	3,870	781
Arkansas	21	4,941	3,148	1,793		1,370	[2] 264,009	50,015	32,791	11,125
California	421	11,877	6,274	4,593	10	4,895	304,802	71,720	48,215	23,737
Connecticut	156	1,476	751	725		1,247	30,105	11,560	5,044	1,775
District of Columbia	12	3,116	1,770	1,336	10	150	46,092	11,459	6,111	5,782
Georgia	81	3,475	1,765	1,765	5	1,188	40,856	25,027	28,281	1,077
Illinois	235	12,705	6,636	5,989	80	9,209	378,724	87,150	53,941	42,646
Indiana	165	2,306	1,272	1,158	43	2,932	115,725	40,545	12,938	3,047
Iowa [3]	57	629	268	329	4	315	26,391	6,677	1,452	1,954
Kansas	29	775	413	375		224	15,418	5,258	2,417	1,450
Kentucky	247	6,974	2,754	4,167	53	1,902	50,144	21,032	8,915	5,578
Louisiana	12	401	245	156		28	6,602	2,072	4,254	1,325
Maine	107	755	396	356	1	224	15,405	4,196	1,465	450
Maryland	417	6,002	3,385	2,292	325	2,326	138,550	47,207	12,524	5,362
Massachusetts	291	5,503	2,5[illegible]	2,9[illegible]		1,563				
Michigan	147	5,011	2,5[illegible]	2,4[illegible]	60	2,430	293,812	44,071	24,647	30,343
Minnesota	36	829	367	462	1	152	21,229	4,295	2,259	1,183
Nebraska	46	809	403	405	1	282	23,107	5,644	4,080	2,586
New Hampshire	66	253	100	152	1	152	11,585	2,302	657	507
New Jersey	312	7,122	4,532	2,541	49	2,575	239,458	30,072	29,173	7,586
New York	923	8,[illegible]	6,[illegible]	2,348	17	5,863	292,327	74,909	81,547	8,019
North Carolina [4]	349	6,011	4,537	1,402	72	1,985	80,542	35,167	22,256	1,036
Ohio	433	8,174	5,118	2,752	304	5,323	208,504	52,506	32,292	9,181
Oregon	12	402	257	145		146	14,718	5,052	1,382	837
Pennsylvania	629	5,722	3,328	2,361	34	4,207	78,211	38,797	47,675	
Rhode Island	72	673	451	220	2	517	15,675	7,619	14,162	3,438
Tennessee	838	10,127	6,960	3,066	101	3,281	233,828	61,170	54,219	8,459
Virginia	58	3,058	2,072	951	35	552	31,931	17,037	13,320	3,420
Washington	35	1,600	731	866	3	1,121	36,729	9,148	21,556	17,415
West Virginia	182	2,711	1,894	788	29	715	68,558	26,492	8,705	3,258
Wisconsin	132	1,330	687	612	1	527	53,554	9,397	9,392	7,930

[1] States which did not report and those which had no clinics have been omitted from the above table: They are Arizona, Colorado, Delaware, Florida, Idaho, Mississippi, Missouri, Montana, Nevada, New Mexico, North Dakota, Oklahoma, South Carolina, South Dakota, Texas, Utah, Vermont, and Wyoming.
[2] Includes 135,465 baths given at the U. S. Public Health Service Clinic, Hot Springs National Park, Ark.
[3] For 8 months.
[4] For 10 months.

TABLE 4.—*Report of cooperative clinic activities furnished through State health departments from 1919 to 1934*

Year	Number of clinics reporting	New cases admitted	Total treatments given	Cases discharged as arrested or cured	Treatments per new case admitted
1919	167	56,092	597,332	14,278	8.92
1920	283	125,131	1,576,542	31,215	12.59
1921	442	149,745	2,105,003	55,457	14.06
1922	541	141,279	2,045,332	60,162	14.48
1923	513	119,317	1,992,631	55,503	16.71
1924	504	118,029	2,147,057	51,658	18.19
1925	495	119,372	2,068,404	47,625	18.02
1926	416	100,718	1,880,380	44,327	18.67
1927	423	107,088	1,954,380	44,701	18.24
1928	461	110,755	2,174,832	49,457	19.64
1929	445	129,315	2,128,417	52,158	17.09
1930	477	137,975	2,547,192	55,592	18.50
1931	512	142,915	2,833,720	57,414	19.83
1932	533	148,933	2,951,150	63,906	19.84
1933	572	149,513	3,200,073	64,697	21.40
1934	616	128,762	3,068,685	55,710	23.83

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actors may have contributed to

The number of clinics receiving Federal, State, and local financial assistance decreased to 3,707, slightly less than in the previous fiscal year. Rapid treatment centers in the States and Territories increased from 41 to 58, and were able to assume a considerable part of the load of infectious transient or recalcitrant patients who in previous years often could not be held under treatment until noninfectious. Accepted on a voluntary basis or on referral from physicians and health departments, or on probation status from courts through health departments, patients in the rapid treatment centers were also given venereal disease education. In many cases vocational and redirectional assistance was given by cooperating social agencies. It is believed these nonmedical services served as a deterrent to reinfection in discharged patients.

During the year clinics admitted for treatment 347,069 syphilis patients. Arsenical drugs distributed by State health departments to clinics and private physicians totaled 10,083,032 doses. State-controlled laboratories performed 22,803,021 serologic tests for syphilis. All of these services were in greater volume than in 1941 and 1942, but less than in 1943.

There were 147,267 cases of gonorrhea admitted to clinic service during the 12-month period, representing a 7.7 percent increase over 1943 and 74.4 over 1941, the last peacetime year. When these figures are compared with the percentage of increase in reported cases of this disease for these same years it becomes apparent that State and federally aided clinics are rendering a larger proportion of the treatments received by these infected persons coming to public attention.

During the year State health departments distributed 18,524,376 tablets of sulfonamide drugs and performed 2,605,716 laboratory tests for the disease. Drug distribution was decreased 16.7 percent over the previous year but showed an increase of 156.6 percent over 1941. Laboratory tests increased by 21.3 percent and 63.8 percent over 1943 and 1941 respectively.

Funds budgeted by Federal, State and local governments were, as follows: Federal funds, $10,934,531—an increase of 3.7 percent over the previous year, and 72.7 percent over 1941; State and local funds, $9,300,275—an increase of 24.7 percent over 1943, and 35.9 percent over 1941.

Appropriations and Allocations

For the fiscal year 1944 a total of $13,211,942 was available to the Venereal Disease Division—$12,367,000 appropriated by the Congress, and $844,942 remaining from the 1943 appropriation. Direct grants amounting to $10,276,200 were made to the States from these funds. The remaining $2,935,742 was available for assignment of personnel to State health departments, and for operation of research and treatment facilities. State budgets of Federal funds for 1944 are shown in table 18, page 118.

Cooperation with State Health Departments

Acute shortages of physicians and other professional and specially trained personnel required for venereal disease control developed in the States as the war progressed. The Venereal Disease Division recruited medical, nursing, and other workers from noncritical areas and assigned them to the health departments of seriously affected States, to help relieve the shortages. The Public Health Service also assisted

the States in recruiting and training large numbers of workers released from nonessential activities. The States assigned these workers to local health departments to find, bring in for examination, and treatment if necessary, persons who had been named as venereal disease contacts.

Training courses for physicians, nurses, and technicians from the States were conducted at the United States Public Health Service Medical Center, Hot Springs, Ark.; the City Isolation Hospital, St. Louis, Mo.; the University of Michigan, Ann Arbor, Mich.; the University of Pennsylvania, Philadelphia; Johns Hopkins Hospital, Baltimore; the Venereal Disease Research Laboratory, Staten Island, N. Y.; and the Mexican Border Control Program, El Paso, Tex. Orientation courses, augmenting the in-service training programs of the State health departments, were conducted at the United States Public Health Service headquarters, Bethesda, Md.

During the year 17 rapid treatment centers were established with funds provided by the Federal Works Agency and with State health departments acting as sponsoring agencies in areas where venereal disease control problems were most serious. The Public Health Service provided medical officers, nurses, and other technical personnel for the centers.

The policy of commissioning sanitarians officers in the Public Health Service for venereal disease control was established. Commissioned sanitarians assisted States in programs of finding infected persons and directing them into rapid treatment centers.

Scientific Development and Research

The most significant research development in recent venereal disease control history was the introduction in 1943 of penicillin as a chemotherapeutic agent in the treatment of both syphilis and gonorrhea.

This very promising discovery was made by the staff of the Venereal Disease Research Laboratory, Staten Island, N. Y. If early hopes are borne out it is believed that this comparatively innocuous, simple, and extremely rapid treatment may serve as an effective means to the control and ultimate eradication of syphilis.

The four original patients in whose treatment the use of penicillin for syphilis was first demonstrated successfully at the Staten Island laboratory remained under observation during the year. One hundred additional patients were treated at Staten Island on the original dosage of 1,200,000 units of penicillin administered in 8 days. Serologic and clinical evidence of syphilis was absent in a large majority of the patients so treated at the end of 3 months' observation, and also at the end of a year in patients who had been under observation that long. A schedule of 2,400,000 units of penicillin, also administered in 8 days, is now being studied.

Patients with gonorrhea have been treated with penicillin on varied time-dosage ratios, on both in-patient and out-patient status. Twenty thousand units of penicillin given intramuscularly in 6 or 7 injections at 3-hour intervals has cured 99 percent of the patients to whom this course of therapy has been given. No failures occurred in the treatment of 42 female patients with 150,000 units.

Other research studies conducted at the Staten Island laboratory concern: (1) the behavior and keeping qualities of cardiolipid antigens in the Kolmer complement fixation test for syphilis; (2) use of Kolmer

technic with gallinaceum and K... tion tests for malaria; (3) cultiva... prophylactic efficiency of various... compounds. Much of the penicill... duced and tested for potency at ... production was discontinued as ... commercial producers.

At the Postgraduate Center, J... Md., evaluation was continued o... clinics using the Eagle-Hogan S... for treating ambulatory syphilis ... had been examined by March 1, ... cure of almost 90 percent, and a ... results followed use of bismuth a... receiving 21 or more milligrams ... weight responded better than pa... mapharsen.

Other research studies continue... ment of arsenic poisoning; (2) ... requirements of spirochetes; (4) ... of syphilis in rabbits; (5) treat... resistance, and (7) synthesis of a... chemotherapeutic value.

Additional research projects i... in by, rapid treatment centers, o... institutions cooperating with the... disease control.

Rapid Treatment Centers

The advantages of providing... disease patients in order to ... demonstrated by long experien... States Public Health Service M...

Intensification of case-finding ... the desirability of rendering lar... in as short a time as possible. ... short, intensive treatment cours... ated the establishment of a num... ing facilities similar to those a... by establishing a Nation-wide ... hospitals, or rapid treatment cen...

The first of the new institutio... 1942. By June 30, 1944, there w... 38 States and 3 Territories. Fo... by State or city health departm... lic Health Service. Funds for ... Federal centers were transferre... the Federal Works Agency.

The centers have a total bed ... patients has been 22 days. With ... and the constant refinement in ra... of stay is dropping precipitously. ... available at the end of the year ... annually if the centers could be ...

technic with gallinaceum and Knowlesi antigens in complement fixation tests for malaria; (3) cultivation of stains of spirochetes; (4) the prophylactic efficiency of various types of calomel ointment and similar compounds. Much of the penicillin used during the past year was produced and tested for potency at the Staten Island laboratory. This production was discontinued as larger supplies became available from commercial producers.

At the Postgraduate Center, Johns Hopkins University, Baltimore, Md., evaluation was continued of records submitted by cooperating clinics using the Eagle-Hogan 8- to 12-week schedule of arsenotherapy for treating ambulatory syphilis patients. Records of 4,823 patients had been examined by March 1, 1944, and showed a rate of apparent cure of almost 90 percent, and a mortality of less than 1 in 1,200. Best results followed use of bismuth and oxophenarsine together. Patients receiving 21 or more milligrams of mapharsen per kilogram of body weight responded better than patients receiving smaller quantities of mapharsen.

Other research studies continued at the center concerned: (1) treatment of arsenic poisoning; (2) prophylaxis of syphilis; (3) growth requirements of spirochetes; (4) efficacy of penicillin in the treatment of syphilis in rabbits; (5) treatment of trypanosomiasis; (6) arsenic resistance, and (7) synthesis of arsenicals and antimonials of possible chemotherapeutic value.

Additional research projects have been conducted at, or participated in by, rapid treatment centers, clinics, universities, and various other institutions cooperating with the Public Health Service in venereal disease control.

Rapid Treatment Centers

The advantages of providing hospital care for transient venereal disease patients in order to insure completion of their treatment were demonstrated by long experience gained in the work of the United States Public Health Service Medical Center at Hot Springs, Ark.

Intensification of case-finding activities by State health departments, the desirability of rendering large numbers of patients noninfectious in as short a time as possible, and the development of a number of short, intensive treatment courses requiring hospitalization, necessitated the establishment of a number of additional institutions, providing facilities similar to those at Hot Springs. This necessity was met by establishing a Nation-wide system of special venereal disease hospitals, or rapid treatment centers.

The first of the new institutions was operated in the latter part of 1942. By June 30, 1944, there were 58 of these centers in operation, in 38 States and 3 Territories. Forty-eight were sponsored and operated by State or city health departments and the remaining 10 by the Public Health Service. Funds for operation and maintenance of the Federal centers were transferred to the Public Health Service from the Federal Works Agency.

The centers have a total bed capacity of 6,100. The average stay of patients has been 22 days. With the introduction of penicillin therapy and the constant refinement in rapid arsenotherapy this average length of stay is dropping precipitously. It is estimated the number of beds available at the end of the year is sufficient to care for 100,000 patients annually if the centers could be operated at full capacity. This can

be accomplished only if case-finding and referral is considerably increased.

Five treatment schedules originally were used in the centers:

1. Five-day slow drip.
2. Five-day rapid intravenous drip.
3. Multiple injection.
4. One-day chemo-fever therapy.
5. Eight-day chemo-fever therapy with vaccine.

The application of these treatment methods and modifications of them to large numbers of patients has been of great research value as well as treatment value. Preliminary evaluations of results obtained by the end of the fiscal year resulted in standardization upon the following treatment schedules:

1. Eight-day slow intravenous drip (a modification of the 5-day slow intravenous drip).
2. Multiple injection, 20-day schedule.
3. Multiple injection, 6-week schedule.
4. Multiple injection, 10-day schedule, with fever produced by vaccine.
5. One-day mapharsen and fever.

Gonorrhea was treated with sulfonamide drugs, and with penicillin when sulfonamide therapy proved ineffective.

Near the end of the fiscal year sufficient penicillin became available to use in treatment of early, previously untreated syphilis at a number of centers.

Rapid treatment centers accept for treatment voluntary applicants and patients referred by private physicians or clinics. Persons with infectious venereal disease apprehended by the police for minor infractions of law may be remanded with suspended sentence to health departments for quarantine at rapid treatment centers until completion of treatment. Clinic patients failing to obtain adequate treatment may be quarantined in the centers.

Cooperation with Armed Services

The Army, the Navy, Coast Guard, War Shipping Administration, and War Food Administration have cooperated with the Public Health Service and State health departments in obtaining and routing uniform reports of information regarding persons to whom or from whom venereal disease infections may have been spread. This cooperation in obtaining information regarding sources of venereal disease infections has materially aided health officers in the control of venereal disease among both the civilian population and members of the armed forces.

In addition to their value in providing health officers with data regarding possibly infected persons, contact reports of the armed forces have served the extremely useful purpose of providing accurate information regarding the places—such as taverns, rooming houses, and other sites—where prostitutes and promiscuous women have been encountered most frequently. This information, along with the assistance of the Social Protection Division of the Federal Security Agency and of the American Social Hygiene Association, has made possible more intelligent and effective enforcement of laws and conduct of programs directed against the commercial exploitation of sex. Cooperative programs of prevention and redirection through welfare and

social agencies have been aided by contact reporting.

In the operation of the joint mili... trol program the Army's main respo... contacts of infected Army personnel ... health authorities has been to locate ... vide diagnostic and treatment servi... have reported back to the armed for... tions, and the Public Health Servic... cooperated in summarizing the data ...

Cooperation among the armed fo... and State health departments with ... sonnel from the armed forces under ... Neither the Army nor the Navy will ... sonnel with venereal disease in ac... and the Navy are making provisio... authorities of complete information ... ment of persons who have been ... ment or observation is necessary. ... the Surgeon General of the Army ... Public Health Service whereby ... test as a part of their separation ... found to have syphilis in an infe... Army until they have received ... noninfectious. Information will ... for following up soldiers who ... tion or demobilization indicate ... present. Uninterrupted treatment ... have not completed their course ... instituted for veterans whose infe... covered. Home communities thus ... of infection from returning veter... will be protected against late rave...

Follow-Up of Selective Service Re...

Data compiled during the fiscal ... serologic evidence of syphilis hav... formed as part of the general ... first 15,000,000 Selective Service ... portion of the work of following ... when necessary, the selectees will ... done by State and local health ... 1944. Many thousands of infecte... and inducted into the armed forc... disqualified. Selective Service ... attempt to reduce the reservoir of ... mated at approximately 3 millio...

Education and Information

Steady growth has been experi... activities despite some curtailm... with the war effort. Direct assis... and State health departments ... programs.

social agencies have been aided by information provided through contact reporting.

In the operation of the joint military-civilian venereal disease control program the Army's main responsibility has been to report civilian contacts of infected Army personnel. The responsibility of civilian health authorities has been to locate these reported contacts and provide diagnostic and treatment services. Civilian health authorities have reported back to the armed forces the results of their investigations, and the Public Health Service Regional Tabulating Units have cooperated in summarizing the data reported.

Cooperation among the armed forces, the Public Health Service, and State health departments will continue after separation of personnel from the armed forces under plans developed during the year. Neither the Army nor the Navy will release back to civilian life personnel with venereal disease in an infectious stage. Both the Army and the Navy are making provisions for the referral to civilian health authorities of complete information regarding the diagnosis and treatment of persons who have been treated but for whom further treatment or observation is necessary. An agreement has been made by the Surgeon General of the Army and the Surgeon General of the Public Health Service whereby soldiers will receive a routine blood test as a part of their separation physical examinations. All soldiers found to have syphilis in an infectious stage will be retained in the Army until they have received treatment sufficient to render them noninfectious. Information will be furnished local health officers for following up soldiers whose blood tests at time of separation or demobilization indicate that noninfectious syphilis may be present. Uninterrupted treatment thus will be assured veterans who have not completed their course of treatment, and treatment may be instituted for veterans whose infections had not previously been discovered. Home communities thus will be protected against the spread of infection from returning veterans and at the same time the veterans will be protected against late ravages of syphilis.

Follow-Up of Selective Service Registrants

Data compiled during the fiscal year showed that 720,000 men with serologic evidence of syphilis had been discovered by blood tests performed as part of the general physical examinations given to the first 15,000,000 Selective Service registrants examined. A large proportion of the work of following up, further examining, and treating when necessary, the selectees with serologic evidence of syphilis was done by State and local health departments during the fiscal year 1944. Many thousands of infected registrants were traced and treated, and inducted into the armed forces or made available unless otherwise disqualified. Selective Service blood testing was the first large-scale attempt to reduce the reservoir of syphilis in the United States, estimated at approximately 3 million infected persons.

Education and Information

Steady growth has been experienced in education and information activities despite some curtailment in services not directly connected with the war effort. Direct assistance was given to the armed services and State health departments in their venereal disease education programs.

One of the most important education activities of the Venereal Disease Division is that conducted for professional workers. Training and orientation courses have been mentioned in a previous section of this report. A post-graduate course in the management and control of venereal diseases was given to physicians upon request at the Medical Center, Hot Springs, Ark. Eleven Mexican physicians were given 6 weeks of instruction preparatory to assignment along the international border. Two physicians from Paraguay were given a 10-week intensive training course.

At the Postgraduate Center, Baltimore, five Public Health Service officers assigned for a year's training were given a detailed course in the theory, technic, and interpretation of serologic tests for syphilis.

Institutes for social hygiene teaching, under the title of Health and Human Relations were conducted during the summer months of 1943 and 1944 by the University of Pennsylvania in cooperation with the Venereal Disease Division of the Public Health Service. Secondary school and college teachers, a number of health educators, and social hygiene workers from various parts of the country attended. During the year a program for carrying venereal disease and social hygiene education to secondary school systems was developed in cooperation with the Division of Public Health Methods and the U. S. Office of Education.

Several new instructional films and pamphlets were produced for physicians and for the general public. These together with revised editions of older pamphlets and other educational materials were widely distributed through State health departments.

Several posters and pamphlets were developed by the Venereal Disease Education Institute of Raleigh, N. C., sponsored by the Z. Smith Reynolds Foundation, the North Carolina State Board of Health, and the Public Health Service. These were supplied at cost to various official and non-official organizations in the United States and Canada. Several pamphlets and posters produced by the institute have been adopted for standard use in the venereal disease control programs of the Army and the Navy.

The Division continued to publish VD War Letter, Venereal Disease Education Circular and Venereal Disease Information. There were 10,000 paid subscriptions to Venereal Disease Information for the year, and an average monthly distribution of 5,500 free copies. During the year approximately 7,000 individual requests for informative literature were received and approximately 156,000 publications were distributed. Twenty-one articles were reprinted from Venereal Disease Information, of which 10 were written by Public Health Service officers.

Industrial Hygiene Division

Efforts have continued in the direction of an effective Nation-wide industrial health program having for its objective the health conservation of manpower by protecting and improving the health of the worker. The various problems involved have been precipitated by the environmental conditions of the workplace and of the community, and by the varying medical requirements for the workers' health.

Industrial health problems have increased in number and in complexity because of changes in the labor force, materials, methods, and

environmental conditions. There ... of women, older workers, and ... employed, who have lost their ski... never had skills; persons exclud... with service-connected disabiliti... materials and methods of produc... and community conditions—all of ...

Quantitative estimates indicating ... health problems have been made. ... million workers they show that th... all types of disability was more ... economic wastage amounted to ...

Responsibilities of this divis... of personnel shortages which h... many of the needs for services have ...

Industrial Hygiene Units

Direct services and consultation ... 47 units in 38 States. These uni... approximately $1,250,000 of which ... VI funds. The working force ... exclusive of personnel on loan fr... year 1942–43, the last year for wh... in 28 States rendered services to ... were war industries, employing ...

Recruiting and training.—The ... included the recruiting and trai... technical and administrative ... division's staff of 120 were on loan ... Authority, the Army, and the Na... Blindness. Most of the trainees ... particularly for engineers and ... practical instruction in the ... ing from a week of observation ... laboratory training was supplem...

Appraisal of programs.—Appra... have been completed in 30 States ... judging from the fact the States ... annually. Some States may use ... other States to strengthen and ... appraisals may serve as a basis ... for the country as a whole. Am... the best practices in industrial h... for industry throughout the cou...

Analysis of the data showed ... tional personnel. Engineers were ... physicians next in order. In servi... needed additional training. The ... ticularly laboratory space, were ... additional field and laboratory e... States.

The best developed phase of ... engineering service, but even in t... for more follow-up work in com...

Table 8.—*Classification of out-patient treatments furnished at United States marine hospitals and other relief stations, fiscal year 1944*

	General medical	Dental	Eye, ear, nose, and throat	Neuro-psychiatric	Tuberculosis	Surgical	Venereal diseases	Tumor clinic, Baltimore, Md.	Inoculations and vaccinations	Arsenicals	Physiotherapy and X-ray	Total
Marine hospitals	152,842	330,541	77,934	262	705	127,365	73,725	2,013	24,754	24,420	220,537	1,019,040
Other relief stations	82,966	44,879	18,637	430	452	86,087	10,761		28,719	6,555	45,211	324,061
Special acting assistant surgeons	23,716	257	1,147	63		2,316	358		1,414	63	149	29,388
Coast Guard vessels and bases	427,806	241,526	93,985	1,620	276	91,059	10,093		101,088	1,357	63,123	1,032,083
Motorized dental stations		48,475										48,475
Veterans facilities	17											17
Emergency medical relief activities, Treasury Department and emergency room, Public Health Service Building	85,128		30,090			25,812						140,030
Emergency medical relief activities, other agencies	25,351		6,271			8,051						37,674
Emergency	552											553
Total	797,424	665,658	213,989	2,319	1,433	348,750	90,956	2,013	155,305	33,293	333,020	2,674,230
Not included above: Sheepshead Bay Hospital, Brooklyn, N. Y.	27,382	81,157										108,539

PUBLIC HEALTH SERVICE

Table 9.—*Services by class of b*

Class of beneficiary	Hospital Number
American merchant seamen	548,012
Coast Guard personnel[1]	[2] [illegible]
Coast Guard dependents	[illegible]
Coast and Geodetic Survey personnel	2,557
Coast and Geodetic Survey dependents	[illegible]
Seamen, Engineer Corps, and Army Transport Service	13,67[illegible]
Seamen, not enlisted or commissioned, from other Government vessels	2,5[illegible]
Seamen from foreign vessels	[illegible]
Persons afflicted with leprosy	[illegible]
Employees' Compensation Commission	[illegible]
Immigrants and alien seamen	[illegible]
Army and Selective Service	[illegible]
Navy and Marine Corps	[illegible]
Veterans Administration	[illegible]
Works Projects Administration	[illegible]
Maritime Service	[illegible]
Mariners for licenses	
Federal employees for other purposes	
All others entitled to treatment	[illegible]
Total	[illegible]
Not included above: Sheepshead Bay Hospital, Brooklyn, N. Y.:	
Coast Guard personnel	[illegible]
All others entitled to treatment	[illegible]
Total	[illegible]

[1] Reports from Coast Guard vessels and shore sta… volume of relief rendered.
[2] Includes Coast Guard in-patient relief in navy…

Table 10.—*Transactions at marine*

Station	Vessels inspected: Quarantine	Vessels inspected: Immigration only	Vessels … of po…: Free
Aberdeen, Wash.	1	0	1
Astoria, Oreg.	154	0	154
Baltimore, Md.	309	93	315
Boston, Mass.	592	511	4[illegible]
Charleston, S. C.	153	1	153
Corpus Christi, Tex. (Port Aransas)	0	0	0
Eureka, Calif.	1	0	1
Fall River, Mass.	0	0	0
Barrancas (Cumberland Sound), Fla.	1	0	1
Fort Lauderdale (Port Everglades), Fla.	39	3	33
Fort Monroe, Va.[1]	501	25	443
Galveston, Tex.	54	4	71
Gloucester, Mass.	0	0	0
Gulfport, Miss.	0	0	0
Jacksonville, Fla.	39	0	34
Key West, Fla.	72	0	7[illegible]
Los Angeles, Calif.	740	93	632
Marshfield, Oreg.	0	0	0
Miami, Fla.	559	1,940	713
Mobile, Ala.	355	3	125
New London, Conn.	1	0	1
New Orleans, La.	735	155	437

[1] Includes Morehead City, N. C.

Table 18.—*Funds budgeted and activities reported for venereal disease control in States and Territories for the fiscal years 1941–44*

	1941	1942		1943		1944		
	Amount or number	Amount or number	Percent increase 1941–42	Amount or number	Percent increase 1942–43	Amount or number	Percent increase 1943–44	Percent increase 1941–44
I. Funds budgeted for venereal disease control	$13,2[illegible],111.76	$15,101,878.77	15.0	$18,632,984.08	17.8	$25,291,806.[illegible]	72.4	80.0
A. Federal [1]	$6,5[illegible]	$8,417,294.35	32.8	$10,535,880.[illegible]	25.8	$10,794,531.[illegible]	5.7	72.7
B. State and local [2]	$6,813,506.09	$6,984,584.82	2.1	$7,467,100.[illegible]	6.8	$9,[illegible],275.00	23.7	35.0
II. Venereal disease control activities:								
A. Syphilis:								
1. Cases reported to State health departments	481,513	479,172	[3] −1.1	550,147	15.4	4[illegible]	[3] −15.2	[3] −4.2
2. Admissions to clinic service	210,615	3[illegible],312	.8	431,760	25.8	347,0[illegible]	[3] −19.6	1.9
3. Average monthly patient load in clinics	381,277	409,103	4.1	4[illegible],251	16.0	413,[illegible]	[3] −10.2	7.5
4. Treatments administered in clinics	10,5[illegible],259	10,642,137	.2	13,[illegible],105	23.0	11,[illegible],312	[3] −10.8	6.8
a. Arsenicals (doses)	4,5[illegible]	4,[illegible],484	.9	6,[illegible]	25.0	5,[illegible],412	[3] −11.5	10.5
b. Heavy metals (doses)	5,175,5[illegible]	5,723,653	[3] −.4	6,805,456	18.8	5,[illegible],800	[3] −13.1	2.7
5. Arsenical drugs (doses) distributed by State health departments	8,161,491	8,727,561	6.9	11,432,408	31.0	10,088,[illegible]	[3] −11.8	23.5
6. Serologic tests in laboratories	16,520,[illegible]	20,172,769	22.1	28,427,271	40.9	22,8[illegible]	[3] −19.8	34.0
B. Gonorrhea:								
1. Cases reported to State health departments	175,182	229,432	11.1	29[illegible]	27.9	31[illegible]	10.0	57.1
2. Admissions to clinic service	85,418	101,421	23.7	137,766	35.0	147,[illegible]	7.1	74.5
3. Average monthly patient load in clinics	26,497	25,[illegible]	[3] −3.6	32,[illegible]	27.0	31,[illegible]	5.3	22.5
4. Treatment visits in clinics	712,164	801,207	12.5	6[illegible],810	[3] −14.0	72[illegible]	5.2	2.0
5. Sulfonamide drugs (tablets) distributed by State health departments	7,218,617	13,886,985	91.7	22,234,521	66.7	18,621,876	[3] −16.7	158.0
6. Tests (for detection of gonococcus) in laboratories	1,234,727	1,363,562	11.0	1,652,055	29.7	2,005,715	21.3	63.0
C. General:								
1. Clinics treating venereal disease	3,245	3,600	10.9	3,852	7.0	3,707	[3] −3.8	14.2

[1] Budgeted specifically for venereal disease control.
[2] Includes estimates of funds apportioned from funds budgeted for general services used for venereal disease control.
[3] Percent decrease.

Table 19.—*Budgetary allocation of Federal funds appropriated under the Venereal Disease Control Act for the fiscal year 1944*

[As of Aug. 31, 1944]

State	Total budgeted	Purpose for which budgeted							
		Administration	Consultation and technical information	Public education	Case-finding and case-holding	Laboratory	Treatment facilities	Drugs	Training
Total	$10,084,531.29	$210,431.92	$1,145,450.56	$236,666.79	$2,139,723.08	$1,938,906.77	$4,408,371.09	$766,450.81	$148,452.73
Alabama	456,589.00	3,880.68	27,511.66	15,153.35	43,909.58	25,580.00	209,156.12	52,214.08	1,242.10
Alaska	29,952.30	2,225.00	4,354.35	609.00	[illegible]	[illegible]	[illegible]	1,030.00	[illegible]
Arizona	73,776.12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Arkansas	[illegible]	10,328.56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
California	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Colorado	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Several other projects are under way. Scientists are investigating the rates at which student nurses convert from negative to positive tuberculin reactions and the stability of tuberculin sensitivity once it is established. The frequency with which tubercle bacilli can be identified in gastric washings following tuberculin conversion also is being determined. Various concentrations of tuberculin are being tested in relation to the extent of the skin reactions following their application.

(2) Kansas City Skin Tests: In Kansas City, the center of an area where histoplasmosis is prevalent, researchers have been observing the course of both fatal and mild cases of the disease. They have made skin tests, X-rays, and blood tests and have tried various forms of treatment. They have also searched for the agent which spreads the infection, by making tests on both plant and animal life.

(3) Tuberculin and Histoplasmin Sensitivity in Young Adults: In February 1949, advisers and consultants of the Division recommended a geographic study of the prevalence of tuberculin and histoplasmin sensitivity in young adults to discover geographic patterns of sensitivity. From 50,000 to 75,000 college freshman and Navy recruits will be tested in this study.

(4) Standardization of Histoplasmin: The Division has developed a method of standardizing histoplasmin. Although not completely satisfactory, it shows promise and may also be useful for standardizing tuberculins when it is perfected.

BCG vaccination.—The BCG program has been steadily expanding. A major comparative study of vaccines from American and European sources is being added to the continuing study of BCG in several mental institutions in Ohio. Michigan and Maryland research programs have also been continued with X-ray examinations, tuberculin retesting, and revaccination. An investigation of vaccination methods and criteria for revaccination was launched in dental, medical, and nursing schools in Boston, Mass., Lewiston, Me., and Washington, D. C.

TRAINING AND LABORATORY WORK

There is still a critical shortage of professional workers in tuberculosis control. In 1949 the Division trained medical officers in X-ray interpretation and gave courses in laboratory techniques and the diagnosis of tuberculosis at the Tuberculosis Evaluation Laboratory in Atlanta, Ga.

The Electronics Laboratory in Rockville, Md., developed methods of measuring voltages used in X-ray work and instruments for testing X-ray units in the field. It also conducted experiments on new equipment to test X-ray radiation.

In all these activities the Division has tried to move closer to its goal—the eventual eradication of tuberculosis from the United States.

Controlling Venereal Diseases

The year 1949 marked another period of outstanding progress in the control of venereal disease. Reported cases of early infectious syphilis showed a downward trend. This occurred despite a 30-percent increase in case-finding during the past two years. General and infant death rates due to syphilis have gone down steadily over the past 11 years. The rates for patients admitted for the first time to mental institutions because of syphilis have continued to decrease.

These reductions in sickness and deaths are impressive in their consistency as well as their extent. They testify favorably to the soundness of methods now used by Federal, State, local, and voluntary agencies to control venereal disease.

Almost all the activities of the DIVISION OF VENEREAL DISEASES are directed toward helping these agencies to prevent, curb, and treat venereal diseases. To achieve this aim, the Division assists in the following ways:

(1) Aids the States in the administration of their venereal disease control programs, rapid treatment centers, and special projects;
(2) Conducts research and demonstrations, and evaluates treatment schedules;
(3) Lends personnel and provides consultation.

The Division cooperates with State and local health departments, private physicians, medical institutions, and voluntary groups, both professional and civic, national and international.

In the cooperative program maintained with the American Social Hygiene Association, emphasis is placed on stimulating public support of venereal disease control.

A medical officer of the Division served in 1949 as chairman of the Expert Committee on Venereal Diseases of the World Health Organization. Other staff members are serving on demonstration and consultation teams in foreign countries.

STATISTICAL TRENDS

The number of syphilis cases reported among civilians in the United States declined in 1949.[1] The total was 206,000 in 1949, as compared with 340,000 in 1948 and 576,000 in 1943, the peak year of Selective Service. (See table 17.)

[1] Fiscal year, as contrasted with the calendar year used in other vital statistics and morbidity data in this report.

The number of reported cases 343,000, as compared with 372,

Table 18 shows the number syphilis among civilians, and the armed forces. In both groups stages declined in 1949. The without a break for nearly three

Since case-finding has increased years, and since there has been morbidity reporting, we can now transmitted less frequently.

Cases of late and late latent 257,000 in 1943 to 124,000 in syphilis were reported. (See

For psychoses due to syphilis pitals (not including Veter from 6.3 per 100,000 population During the same period the psychoses due to syphilis admissions.

RAPID TREATMENT CENTE

The number of patients tr was 11 percent below that of uing downward trend in re made by the Public Health projects providing treatment Columbia, Alaska, Puerto R

Of all patients admitted to syphilis comprised 79 perce and patients with other ve mitted for examination and 16 percent.

CASE-FINDING AND CONTRO

State and local health dep clinics for the diagnosis and health departments alone

The modern concept of v clinics should take the treatment of patients who d of all patients. That the responsibilities is evident in

The number of reported cases of gonorrhea decreased in 1949 to 343,000, as compared with 372,000 in 1948. (See table 17.)

Table 18 shows the number of cases of primary and secondary syphilis among civilians, and the combined figure for civilians and the armed forces. In both groups, reported cases of syphilis in these stages declined in 1949. The reduction among civilians has continued without a break for nearly three years.

Since case-finding has increased by 30 percent during the last two years, and since there has been no obvious change in the quality of morbidity reporting, we can reasonably assume that syphilis is being transmitted less frequently.

Cases of late and late latent syphilis decreased 52 percent, from 257,000 in 1943 to 124,000 in 1949. About 16,000 cases of congenital syphilis were reported. (See table 17.)

For psychoses due to syphilis the admission rates to mental hospitals (not including Veterans Administration facilities) declined from 6.3 per 100,000 population in 1938 to 4.3 in 1947. (See table 19.) During the same period the admissions to mental institutions with psychoses due to syphilis declined from 9.2 to 6.0 percent of all admissions.

RAPID TREATMENT CENTERS

The number of patients treated in rapid treatment centers in 1949 was 11 percent below that of 1948. This decline reflects the continuing downward trend in reported syphilis cases. Allotments were made by the Public Health Service to 54 rapid treatment center projects providing treatment services in 40 States, the District of Columbia, Alaska, Puerto Rico, and the Virgin Islands.

Of all patients admitted to rapid treatment centers, patients with syphilis comprised 79 percent; patients with gonorrhea, 3 percent; and patients with other venereal diseases, 2 percent. Patients admitted for examination and observation accounted for the remaining 16 percent.

CASE-FINDING AND CONTROL IN THE STATES

State and local health departments in 1949 operated about 2,200 clinics for the diagnosis and treatment of venereal diseases. Local health departments alone operated two-thirds of these.

The modern concept of venereal disease control is that out-patient clinics should take the responsibility for intensive case-finding, treatment of patients who do not require hospital care, and follow-up of all patients. That the States and communities are accepting these responsibilities is evident in their reports for 1949. Approximately

2,276,000 persons were examined in public venereal disease clinics. As a result, almost half a million persons were found to be infected.

Although new preparations of penicillin have made possible the treatment of syphilis in clinics and physicians' offices, public clinics in 1949 were still referring large numbers of patients to rapid treatment centers and other hospitals. For example, 65 percent of the cases of infectious syphilis diagnosed in public clinics were sent to in-patient treatment centers. A high proportion of syphilis cases in other stages and of congenital syphilis cases also were treated in in-patient facilities. On the other hand, the clinic staffs treated practically all the gonorrhea cases diagnosed by State and local health departments. (See table 20.)

Staffs of public clinics concentrated on locating and bringing to treatment contacts mentioned by patients with infectious syphilis. On the average, each patient interviewed in public clinics mentioned one contact. Patients interviewed in rapid treatment centers, however, mentioned more contacts than did those interviewed in the clinics. During 1949, over 70 percent of the case-finding visits made by public clinic staffs were to persons named as contacts.

Case-finding demonstrations.—During the year, the Public Health Service allotted funds, personnel, and supplies to 36 States and Territories for special case-finding projects in more than 1,500 communities. The type of activity varied from community to community, in attempts to develop new case-finding techniques or to demonstrate proved methods.

Some projects relied chiefly upon public appeal—radio, newspapers, movies, advertising—as a case-finding device. Some concentrated on interviewing patients and tracing their contacts. Others staged mass blood-testing surveys. A number of projects combined two or more of these techniques.

Evaluating case-finding techniques.—A study was made of the use of radio as a medium for motivating persons infected with syphilis or gonorrhea to seek diagnosis. The findings showed that persons in low socioeconomic groups, known usually to have a high prevalence of syphilis, were not reached as well by radio as were other members of the community, and that they were less able to recall radio publicity.

Persons who suspect they have a venereal disease talk to others about their trouble. The advice of relatives or friends may be the decisive factor in sending a person to diagnosis or keeping him away. Therefore it is important that patients in clinics and treatment centers be satisfied with the services they receive and that they be properly educated regarding venereal disease. Otherwise, their advice to others will deter new patients.

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A study of patients in a group of clinics and treatment centers showed, in general, that their attitudes were favorable. However, attitudes varied widely among the clinics and centers under study. Patients in the youngest age group were about four times as critical of the services they had received as those in the oldest age group. Therefore more stress should be placed on gaining approval of young people, among whom venereal diseases are known to be more prevalent.

A study was made in several States to determine the comparative response to contact interviewing of patients with varying social and economic backgrounds. It was found that differences in interviewing procedures accounted for varying responses to a far greater extent than did differences in the social and economic characteristics of the patients. In other words, if the interviews were conducted in adequate surroundings and the interviewers were skilled and understanding, patients of both high and low socio-economic status cooperated. The interest stimulated by this study led to the establishment of interviewing schools in several cities.

RESEARCH AND PROFESSIONAL TRAINING

Intensive basic and clinical research over the past thirty years—and especially in the past decade—have made possible the remarkable gains in reduction of syphilis and gonorrhea. The Division of Venereal Disease throughout this period has been the research arm of the Public Health Service in this field.

The Division conducts research in its own laboratories and treatment centers and in cooperative projects with other institutions. Working closely with the National Institutes of Health, it also correlates the data developed by investigators who receive research grants for studies of venereal disease.

Scientists continue to develop new knowledge which one day will lead to further improvements in the prevention, diagnosis, and treatment of venereal diseases. Previously gained knowledge, as well as future developments, must be passed on to practicing physicians and public health workers. Thus, the Division also conducts training programs for professional personnel.

Laboratory research.—The Venereal Disease Research Laboratory at Stapleton, Staten Island, N. Y., continued its program of fundamental research and development of treatment methods.

Basic studies in bacteriology were concerned primarily with spirochetes, although some dealt with fungi, actinomycetes, and bacteria. The search continued for new antibiotics effective against these organisms.

One of the Laboratory's most important programs is the improvement and evaluation of diagnostic tests for syphilis. Research is

conducted by the Laboratory's staff for the National Advisory Serology Council. During the year, comparative evaluations were made of complement-fixation and flocculation tests, using the new cardiolipin and lecithin antigens. Much of this work was reported in a new manual on serodiagnosis. The Laboratory also trains advanced students in the technical aspects of serology; and it standardizes and distributes materials for serologic testing.

Penicillin schedules were still being studied clinically in order to reduce the time required for treatment and at the same time to obtain maximum effectiveness from the drug. During the year, a new preparation—penicillin aluminum monostearate—was used. Preliminary findings indicate that three-day treatment schedules with this preparation produce favorable results.

Clinical research.—The Public Health Service Medical Center, Hot Springs, Ark., conducts clinical studies on the treatment of the venereal diseases, trains professional workers, and serves as the Arkansas State treatment center.

Studies were continued on treatment schedules in syphilis of the central nervous system. The response of patients with cardiovascular syphilis to treatment was studied. The use of procaine penicillin in the treatment of syphilis and gonorrhea was also observed.

Two postgraduate refresher courses were held for physicians. The University of Arkansas School of Medicine sent senior medical students to the Medical Center for training in the diagnosis and management of venereal diseases. In cooperation with the Arkansas State Board of Health, the Medical Center participated in educational seminars designed to improve venereal disease control in Negro school districts. Contact investigators and nurses from the State Board of Health and hospitals in Arkansas received instruction.

Cooperative research.—In cooperation with the University of North Carolina, the Syphilis Experimental Laboratory was established as successor to the Reynolds Research Laboratory. One of several studies during the year was devoted to the duration and mechanism of acquired immunity in experimental syphilis. Evidence accumulated to date suggests that immunity, once developed, is permanent. The results of these experiments, however, are not yet conclusive. Reports of the presence of immobilizing antibodies in the serum of persons infected with syphilis were, for the most part, confirmed. A cooperative study with Duke University is in progress to evaluate the immobilizing technique in relation to the biologic false-positive test for syphilis.

The Institute for the Study of Venereal Disease, University of Pennsylvania, continued its program of research and training, in

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EVALUATING TREATMENT

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cooperation with the Public Health Service and other sponsors. The projects included studies on the action of penicillin in the treatment of syphilis in its various stages. The effects of penicillin in syphilis of the cardiovascular system were evaluated by means of electrocardiographic studies. Other projects dealt with the Herxheimer reaction in paresis and with resistance and relapse of patients treated with penicillin. The Institute continued its educational program for medical and nursing students and served as a diagnostic and consultant center for physicians in Pennsylvania and New Jersey.

Venereal disease nursing.—Nurse consultants of the Division of Venereal Disease concentrated in 1949 on the improvement of nursing education in this subject. They assisted university schools of nursing in establishing courses and arranged for student nurses to have field training in rapid treatment centers. They also participated in five institutes for State health departments.

EVALUATING TREATMENT

Since 1943, when the Venereal Disease Research Laboratory first demonstrated that penicillin is effective in the treatment of syphilis, the Division of Venereal Disease has continuously tested the effectiveness of various preparations of the drug and various treatment schedules. This has been done by systematically collecting detailed reports from rapid treatment centers and other institutions. To determine if the disease has relapsed or progressed, it is necessary to observe patients, treated with penicillin at different stages of the disease, for a number of years.

The introduction in 1949 of procaine penicillin with aluminum monostearate has resulted in yet another significant advance in the treatment of syphilis. Procaine penicillin already is more widely used than the earlier oil-beeswax preparations. The addition of 2 percent aluminum monostearate to procaine penicillin still further delays the patient's absorption of the antibiotic.

Records of more than 1,000 patients treated with this preparation have been collected for analysis. The dosages range from 300,000 to 4.8 million units, given in one, two, and four injections. The patients have not been under observation long enough for comparing results with the older preparations and schedules. It appears, however, that the shorter and simpler schedules, with 2.4 million or more units of the new preparation, compare favorably with equal amounts of crystalline penicillin G given every two or three hours.

In December 1948, the Division issued a cumulative report on 45 schedules of penicillin therapy. Patients in this study had been observed for two years following treatment for secondary syphilis.

The report showed that the effectiveness of the schedules varied widely, as measured by negative blood tests and re-treatment of patients. In general, the most effective of these schedules used crystalline penicillin G with a minimum total dosage of 2.4 million units.

The Division of Venereal Disease has launched several experiments in widely separated cities to determine whether public clinics can hold patients to a complete schedule of ambulatory treatment. Findings to date show that from 89 to 97 percent of the patients can be held on schedules ranging from 6 days to 7 weeks. The shortest schedules showed the best case-holding results.

VENEREAL DISEASE EDUCATION

Seminars are held annually in various regions of the country to bring current information on all aspects of venereal disease control to health personnel. In 1949, seminars were held in Birmingham, Ala., Houston Tex., Los Angeles, Calif., and St. Louis, Mo.

The 1948 edition of the *Directory of Venereal Disease Clinics* was expanded to include summaries of the laws of each State requiring premarital and prenatal blood tests and of diagnostic laboratory services available in each State.

An experiment, to discover whether radio could be used successfully as a venereal disease case-finding instrument, was launched with a series of fourteen transcribed radio programs produced by Columbia University. These dramatic, musical, and documentary programs won wide public acceptance. It is estimated that in the past year more than 25 million people listened to venereal disease case-finding appeals by radio, broadcast over more than 1,100 stations throughout the country.

Columbia University Press, with the cooperation of the Public Health Service and the State of New Jersey, set up the Columbia University Communication Materials Center to provide, on a non-profit basis, a variety of public appeal materials for use by State and local agencies. The Center arranged for the production and distribution of popular materials for all information media to be used in venereal disease programs.

The Mississippi State Health Department, with the aid of the Division of Venereal Disease, produced an educational motion picture on syphilis for community case-finding programs. An all-Negro cast volunteered their services in the production of this exceptionally fine documentary film. Another film, starring Joe Louis, was produced by the New York City Health Department. The Division of Venereal Disease also produced other popular materials, slanted to various audiences.

New Ways to Fight Old D...

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Atlanta, Ga., is the Public H...
infectious diseases. Its chie...
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The strategy back of the...
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Table 16.—*Total number of nurses employed for public-health work*[1] *in the States and Territories on Jan. 1 of specified years*

	1945	1946	1947	1948	1949
Grand total[3]	20,8[illegible]6	20,672	21,400	22,905	23,373
State agencies	809	945	993	1,003	1,051
Local official agencies:					
Rural	4,038	4,665	4,800	4,863	5,405
Urban	5,700	5,805	5,925	6,308	6,498
Local boards of education	4,321	4,276	4,037	5,019	5,165
Local nonofficial agencies	4,749	4,655	5,023	5,057	4,895
Schools of nursing	(2)	84	102	133	100
National agencies[3] and universities[4]	295	241	236	222	242

[1] Exclusive of industrial nurses.
[2] Data not available.
[3] A considerable number of nurses employed by the American Red Cross are engaged in activities that are not strictly public health nursing.
[4] Universities offering programs of study in public health nursing approved by the National Organization for Public Health Nursing.

Table 17.—*Diagnosed cases of venereal diseases reported for the first time, fiscal years 1941–49*[1]

Fiscal year	Syphilis: Total	Syphilis: Primary and secondary	Syphilis: Early latent	Syphilis: Late and late latent	Syphilis: Congenital	Syphilis: Not stated	Other venereal diseases: Gonorrhea	Other venereal diseases: Chancroid[2]	Other venereal diseases: Granuloma inguinale	Other venereal diseases: Lymphogranuloma venereum
IN STATES AND TERRITORIES										
1941	476,929	65,319	108,564	201,960	17,953	82,832	193,032	3,275	643	1,347
1942	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	215,594	5,549	1,278	1,915
1943	[illegible]	[illegible]	[illegible]	[illegible]	17,692	[illegible]	[illegible]	8,562	1,766	2,408
1944	472,725	90,316	127,873	228,801	13,707	42,498	301,601	8,020	1,771	2,165
1945	[illegible]	78,660	[illegible]	[illegible]	14,730	[illegible]	[illegible]	[illegible]	1,849	2,105
1946	[illegible]	95,229	[illegible]	128,659	11,183	20,767	372,564	7,820	2,316	2,543
1947	[illegible]	105,772	111,438	123,571	14,127	[illegible]	[illegible]	[illegible]	2,413	2,740
1948	345,932	91,428	101,[illegible]	125,028	11,743	22,727	372,160	8,353	2,325	2,518
1949[3]	296,455	84,823	87,960	102,824	15,639	14,059	342,896	7,592	2,015	2,152
IN CONTINENTAL UNITED STATES										
1941	477,841	67,975	105,658	203,190	17,502	82,413	191,396	3,065	647	1,345
1942	472,245	75,701	120,453	242,236	19,021	[illegible]	212,384	5,426	1,271	1,668
1943	564,918	82,200	146,099	252,976	19,173	64,641	275,046	8,355	1,740	2,391
1944	[illegible]	78,418	[illegible]	[illegible]	13,574	[illegible]	[illegible]	7,861	1,758	2,857
1945	[illegible]	[illegible]	[illegible]	142,731	[illegible]	[illegible]	[illegible]	[illegible]	1,846	2,025
1946	[illegible]	94,367	[illegible]	[illegible]	[illegible]	[illegible]	364,873	7,078	2,204	2,503
1947	[illegible]	[illegible]	[illegible]	122,237	[illegible]	[illegible]	[illegible]	9,052	2,403	2,035
1948	[illegible]	[illegible]	[illegible]	123,072	[illegible]	[illegible]	[illegible]	[illegible]	2,315	2,494
1949[3]	[illegible]	[illegible]	81,317	121,875	14,257	13,909	[illegible]	7,237	2,611	2,170

[1] Known military cases are excluded.
[2] Includes some unspecified "Other Venereal Diseases."
[3] Data are provisional.

Table 18.—*Trend of syphilis and gonorrhea morbidity reporting, United States civilians and armed forces, 1941–49*

Fiscal year	Reported cases: Syphilis: Total including not stated	Reported cases: Syphilis: Primary or secondary	Reported cases: Syphilis: All early latency, secondary and early latent	Reported cases: Syphilis: Congenital	Reported cases: Syphilis: Late and late latent	Reported cases: Gonorrhea	Rate per 1,000 population: Syphilis: Total including not stated	Rate per 1,000 population: Syphilis: Primary or secondary	Rate per 1,000 population: Syphilis: All early latency, secondary and early latent	Rate per 1,000 population: Syphilis: Congenital	Rate per 1,000 population: Syphilis: Late and late latent	Rate per 1,000 population: Gonorrhea
CONTINENTAL UNITED STATES CIVILIANS												
1941	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1942	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1943	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1944	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1945	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Table 13.—*Trend of syphilis and gonorrhea morbidity reporting, United States civilians and armed forces, 1941–49*

Fiscal year	Reported cases: Syphilis: Total including not stated	Reported cases: Syphilis: Primary or secondary	Reported cases: Syphilis: All early primary-secondary and early latent	Reported cases: Syphilis: Congenital	Reported cases: Syphilis: Late and late latent	Reported cases: Gonorrhea	Rate per 1,000 population: Syphilis: Total including not stated	Rate per 1,000 population: Syphilis: Primary or secondary	Rate per 1,000 population: Syphilis: All early primary-secondary and early latent	Rate per 1,000 population: Syphilis: Congenital	Rate per 1,000 population: Syphilis: Late and late latent	Rate per 1,000 population: Gonorrhea
CONTINENTAL UNITED STATES CIVILIANS												
1941	477,[illegible]	67,[illegible]	175,016	17,592	201,190	191,2[illegible]	3.62[illegible]	0.51[illegible]	1.3[illegible]	0.1[illegible]	1.52[illegible]	1.45
1942	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	212,284	[illegible]	[illegible]	[illegible]	.128	[illegible]	1.61
1943	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.11
1944	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1945	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1946	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1947	[illegible]	[illegible]	[illegible]	[illegible]	122,257	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1948	[illegible]	[illegible]	[illegible]	[illegible]	121,972	[illegible]	2.245	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1949 [1]	[illegible]	54,252	[illegible]	14,257	121,675	[illegible]	1.971	.370	[illegible]	[illegible]	.852	[illegible]
TOTAL ARMED FORCES AND UNITED STATES CIVILIANS												
1941	[illegible]	74,814	192,672	17,592	201,190	225,221	[illegible]	0.558	1.377	0.133	1.517	[illegible]
1942	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.13
1943	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.812	[illegible]	[illegible]	[illegible]	[illegible]
1944	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.670	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1945	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1946	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.904	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1947	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.19
1948	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.331	[illegible]	[illegible]	[illegible]
1949 [1]	[illegible]	[illegible]	150,901	14,257	121,675	[illegible]	[illegible]	[illegible]	[illegible]	.097	[illegible]	2.55

[1] Data are provisional.

SOURCES

Civilian morbidity.—Reported cases from PHS Form 8038-D.
Army morbidity.—1941–46 from "Incidence of Venereal Diseases in United States Army Troops," Medical Statistics Division, Department of the Army; 1947–49 from "Health of the Army."
Navy morbidity.—1941–45 from Medical Statistics Division, Bureau of Medicine and Surgery, Department of the Navy; 1946–49 from "Statistics of Navy Medicine."
Population data.—Rates based on Census Bureau "Current Population Reports," estimates as of Jan. 1 (midpoint of fiscal year).

Table 19.—Rates of mortality, infant mortality, and admissions to mental hospitals due to syphilis, for specified years

CONTINENTAL UNITED STATES CIVILIANS

Year	Syphilis mortality rates per 100,000 population	Infant mortality rates due to syphilis per 1,000 live births	First admission rates to mental hospitals due to syphilis per 100,000 population [1]	Year	Syphilis mortality rates per 100,000 population	Infant mortality rates due to syphilis per 1,000 live births	First admission rates to mental hospitals due to syphilis per 100,000 population
1933	15.1	0.78	6.5	1941	13.3	0.41	6.1
1934	16.[illegible]	.74	6.6	1942	12.2	.30	5.9
1935	15.4	.70	6.6	1943	12.1	.25	5.4
1936	15.2	.73	6.6	1944	11.[illegible]	.27	5.3
1937	15.1	.66	6.4	1945	10.7	.25	5.2
1938	15.9	.63	6.5	1946	9.3	.16	4.7
1939	15.0	.57	6.5	1947	8.[illegible]	.14	4.2
1940	14.4	.53	5.8	1948 (estimate)	8.2	.13	-------

[1] Does not include admissions to Veterans' Administration hospitals.

Table 20.—Summary of clinic and epidemiologic activity, total United States and Territories, fiscal year 1949 [1]

Total number of diagnostic observations completed by public clinics	2,275,556
Found not infected with a venereal disease	1,813,972
Found infected with a venereal disease	461,584

Item	Syphilis				Gonorrhea	Other venereal disease
	Primary-secondary	Early latent	Congenital	Other		
Number of previously untreated cases:						
Referred to rapid treatment centers or other inpatient care facilities for treatment	20,6[illegible]	35,070	5,456	19,263	4,663	3,389
Referred to private physicians for treatment	1,4[illegible]	3,628	868	3,3[illegible]	2,1[illegible]	131
Admitted to treatment in public clinics	9,12[illegible]	10,865	2,070	13,250	256,472	5,3[illegible]
Number of contacts obtained by staff interview of both previously treated and previously untreated patients in public clinics	90,7[illegible]	38,871	3,033	19,134	226,397	3,593
Number of epidemiologic investigations by public facilities:						
Completed on contacts of known cases ... 359,638						
Completed on suspects other than contacts ... 134,015						
Previously untreated cases brought to treatment	14,971	28,030	5,560	28,959	66,334	1,528
As a result of contact investigation	10,2[illegible]	13,117	1,8[illegible]	6,905	53,244	616
As a result of investigations of other suspects	4,5[illegible]	15,[illegible]	3,[illegible]	22,054	13,090	912

[1] 1949 data are provisional.

(5) WORKING FOR WO[illegible]

THE DIVISION OF INTERNATIO[illegible]

A new concept of world healt[illegible]
Until recently, our theme was th[illegible]
and that international health w[illegible]
spread of epidemics throughout[illegible]
vision. We realize that there[illegible]
orderly world so long as prove[illegible]
thirds of the earth's inhabitants [illegible]
development.

In the United States and [illegible]
newborn infant can now expe[illegible]
proverbial three score years [illegible]
person has time to get a full ed[illegible]
or profession. He has a chanc[illegible]
play. We have a population[illegible]
There will be few persons to fe[illegible]

In India, the expectation of [illegible]
tropical and semi-tropical [illegible]
still lacking, the chances for liv[illegible]

A high death rate corresp[illegible]
of the people are constantly in[illegible]
have little time for learning [illegible]

Obviously, people with [illegible]
education and economic [illegible]
which has to be fed rema[illegible]
brief span of years. The [illegible]
comes deadly to progress.

A forward-moving world [illegible]
ponent parts are moving tog[illegible]
where in the world is, ther[illegible]
merely for our own protection[illegible]
throughout the world. The [illegible]
premature death, and ignora[illegible]
point of preventable disease: [illegible]
secure until life itself is reaso[illegible]
body strong.

VICTORY IN EUROPE

When World War II was [illegible]
the war-ravaged countries of [illegible]
nished supplies and know-ho[illegible]
through UNRRA and other [illegible]
campaign was manned to a [illegible]

being made of the preservative action of sodium fluoride alone, sodium fluoride with mercuric chloride, and potassium oxalate with mercuric chloride.

Eighteen State and local health agencies received consultation during the fiscal year. Technical consultation was provided for five short-term screening programs. Four short-term detection programs which used the Clinitron were completed, with 5,400 persons screened. Courses on various aspects of a diabetes program were held in the Boston Diabetes Office.

Home care programs can help to alleviate the shortage of hospital beds for the chronically ill. In cooperation with the Division of Public Health Methods and the Commission on Chronic Illness, a study of 11 representative home-care programs in the United States was launched.

Consultation was given to the Upholsterers International Union regarding health services for older people in a retirement village the Union is planning to establish in Florida. A panel presentation was made to the National Social Welfare Assembly Conference on Individualized Services on unmet health needs for the aging.

VENEREAL DISEASE PROGRAM

During fiscal 1954, State and Territorial health departments reported approximately 142,000 cases of syphilis, 215,000 cases of gonorrhea, and 5,000 cases of other venereal diseases. These figures represent a decline from 1953 of about 15 percent in syphilis, 2 percent in gonorrhea, and 11 percent in other infections. Early syphilis (primary, secondary, and early latent) accounted for 33,700 cases as compared with 42,600 in 1953.

There were an estimated 5,500 deaths from syphilis in calendar year 1953. There were no significant changes in syphilis death rates or in the rate of first admissions to mental institutions due to syphilitic psychoses. The general death rate due to syphilis in 1953 was 3.4 per 100,000 population, as compared with 3.7 in 1952. The infant mortality rate due to syphilis was about 2 per 100,000 live births, as it has been for the past 5 years. The rate of first admissions to mental institutions was 1.8 per 100,000 in 1953 as compared with 6.1 in 1943.

More than 2 million diagnostic examinations made in local clinics yielded about 204,000 positive diagnoses, although many of these patients were already known to the examiners. Clinic personnel interviewed about 183,000 patients and completed 400,000 investigations of persons exposed to venereal infection, 70 percent of whom were brought to examination. Health department laboratories reported an estimated 12,418,000 serologic tests, compared with 13,778,000 in 1953.

Federal project funds helped to support 42 prevention and control centers, blood testing campaigns in areas of high syphilis prevalence, the services of interviewers and investigators, and field studies of penicillin therapy and *Treponema pallidum* immobilization (TPI) testing. The Venereal Disease Research Laboratory continued to provide public health laboratories with reagents and control serums to aid in the diagnosis of syphilis.

A study of syphilis immunology continued, with the participation of volunteers from the inmate population of Sing Sing Prison and in cooperation with the prison medical staff and the New York State Department of Health. It has been shown that acquired immunity does develop in man, that it evolves rather slowly, and that it reaches a significantly high degree. Evidence suggests that the administration of killed *Treponema pallidum* may produce a booster effect on this immunity.

Other cooperative studies showed that adequate therapy in latent syphilis prevents progression to the late manifest stages of the disease; that syphilis lowers, by about 17 percent, the life expectancy of persons 25 to 50 years of age who have received no appreciable amount of therapy; and that penicillin successfully arrests the process of asymptomatic neuro-syphilis.

A survey of the residences of contacts showed that an average of 8.8 percent of contacts of civilian patients resided outside the reporting State, as contrasted with 36.3 percent of contacts of military patients.

Data from 47 States showed that 22 percent of all patients with primary and secondary syphilis were under 20 years of age at diagnosis, and 80 percent were under 35 years. Data on gonorrhea followed substantially the same age patterns. In both diseases, the rate increased rapidly after 14 years of age. The study also demonstrated that females acquire syphilis earlier in life than males.

Problems of laboratory testing for syphilis were further investigated in 1954. Work on the agglutination test, using killed *T. pallidum*, has led to several significant findings even though the test is not ready for clinical application. *T. pallidum*, the organism of syphilis, induces formation of a variety of substances in the blood, only one of which can be measured by the TPI test and another by serologic tests, while many such substances may enter into agglutination of the syphilitic organism.

Twenty-four Prevention and Control Centers participated in a study of penicillin reactions covering 16,000 patients, most of whom were treated with a one-injection schedule but some of whom were treated on schedules of more than 3 weeks' duration. No deaths occurred among these 16,000 patients because of penicillin reactions. Less than 1 percent had reactions sufficiently severe to bring them back to the clinic. A 2-year study of the effectiveness of benzathine

penicillin G yielded succe
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Two postgraduate cours
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diagnosis. A manual wa
treatment procedures f

OCCUPATIONAL HEALTH

A study of the effect of
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of the noise conditions.

In the study of ventilat
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methods to control expo
proper ventilation.

Environmental and die
whether or not exposure
produce cancerous or pr
will aid in the establishm

Largely as a result of
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a highly toxic gas,
account for ozone tox

Possible hazards are a
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These agents were found
cations but may cause pr

In the field of dermat
ment of chemically pure
cross-sensitivity studies
the skin sensitization
were evaluated. Water
creams were evaluated.

Industrial hygiene con
tributed to the develop
methods, and techniques
hazardous factors in the

TUBERCULOSIS CONTRO

Twenty-six hospitals
in evaluating the treat

penicillin G yielded success rates of 96 to 100 percent in the primary and secondary stages of syphilis.

Two postgraduate courses on venereal disease were held in 1954 for physicians in private practice, the armed services, and health departments. The Venereal Disease Research Laboratory conducted 14 refresher classes on serologic techniques and other phases of laboratory diagnosis. A manual was prepared which sets forth diagnosis and treatment procedures for all five of the venereal diseases.

OCCUPATIONAL HEALTH PROGRAM

A study of the effect of noise on hearing, designed to develop a basis for noise control in industry, was undertaken. Serial audiograms were obtained from a group of workers employed in the industries at four Federal penitentiaries, together with measurements and analyses of the noise conditions.

In the study of uranium mining and milling in the Colorado Plateau, the year's major accomplishment was the development of adequate methods to control exposures to radioactive materials in mines by proper ventilation.

Environmental and dermatologic studies were made to determine whether or not exposures during the processing of shale oil will produce cancerous or precancerous skin changes. The information will aid in the establishment of practicable control measures.

Largely as a result of study of ozone toxicity, the threshold limit value for ozone has been lowered. Ozone itself was found to be a highly toxic gas, and no evidence was found that nitrogen oxides account for ozone toxicity.

Possible hazards arising from the use of substances which selectively bind or remove certain metals from the circulation were studied. These agents were found useful in treating lead and other metal intoxications but may cause problems due to binding of essential metals.

In the field of dermatology, work has continued on the development of chemically pure nickel and cobalt salts to permit controlled cross-sensitivity studies. Under a contract with the U. S. Air Force, the skin sensitization properties of 13 mildew-proofing agents were evaluated. Waterless hand cleansers and silicone protective creams were evaluated.

Industrial hygiene engineering research in the past year has contributed to the development or modification of various instruments, methods, and techniques for the appraisal and control of potentially hazardous factors in the working environment.

TUBERCULOSIS CONTROL PROGRAM

Twenty-six hospitals cooperated with the Public Health Service in evaluating the treatment of tuberculosis with isoniazid, alone or